



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

F/CM6;PNE

JUN 2 1982

TO: Distribution*
FROM: F/CM6 - Clem Bribitzer *Clem Bribitzer*

SUBJECT: Amendment No. 5 to the Fishery Management Plan for the Bering Sea and Aleutian Islands Groundfish Fishery

Attached is the subject amendment for your review and comments. I would appreciate receiving your response (including negative comments) by June 15, 1982.

Please contact Paula Evans (634-7449) if you have any questions.

Attachment

*Distribution

F/MM
F/UD - Hutchinson
F/CM5
F/CM6 - Martenson, Siegel
F/IA - (without attachments)
F/CM7 - (without attachments)
Fx5
GCF (without attachments)
PP/EC
F/HP
F/CM1
F/CMx2
F/SR1
F/SR1 - Thompson
F/SR4 - Wheeland
CZx4 - Tolson
F/CM - Fricke
F/AKR (without attachments)



11

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 611

Foreign Fishing Regulations, Groundfish of the Bering Sea and Aleutian Islands Area

AGENCY: National Oceanic and Atmospheric Administration (NOAA), Commerce

ACTION: Proposed rule; notice of approval and availability of plan amendment.

SUMMARY: The NOAA has initially approved Amendment 5 to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area. The amendment reduces the number of chinook salmon that may be taken incidentally in the eastern Bering Sea foreign trawl fishery. This action is intended to: (1) further limit the incidental catch and unnecessary mortality of chinook salmon, a prohibited species in the foreign fishery, and (2) facilitate the enforcement of existing regulations designed to protect prohibited species.

DATE: Comments are invited until (insert date 45 days after publication in Federal Register).

ADDRESSES: Comments should be addressed to Robert W. McVey, Director, Alaska Region, National Marine Fisheries Service, P. O. Box 1668, Juneau, Alaska 99802. Individual copies of the amendment may be obtained by contacting the North Pacific Fishery Management Council, P.O. Box 3136 DT, Anchorage, Alaska 99510, (907) 274-4563.

FOR FURTHER INFORMATION CONTACT: Robert W. McVey, (907) 586-7221.

SUPPLEMENTARY INFORMATION:

The Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area (FMP) was implemented on January 1, 1982 (46 FR 63295, December 31, 1981) pursuant to the Magnuson Fishery Conservation and Management Act (Magnuson Act). Six amendments to the FMP have been approved by the North Pacific Fishery Management Council (Council). The notice of final approval and implementation of Amendments 1a and 2 was published January 12, 1982 (47 FR 1295). Amendments 1 and 4 have both been submitted for Secretarial review. Amendment 3 to the FMP was approved by the Council on September 26, 1981, and proposes to establish a management regime to reduce the incidental catch of salmon, Pacific halibut, king crab and Tanner crab, which are prohibited species in the foreign groundfish fishery of the Bering Sea and Aleutian Islands area.

Amendment 5 proposes to limit the prohibited species catch (PSC) of chinook salmon in the eastern Bering Sea foreign trawl fishery to 45,500 fish. This amount was approved by the Council on September 26, 1981, as

part of Amendment 3 and is a reduction over the current chinook salmon PSC limit of 55,250 fish established by Amendment 1a. These values for the chinook salmon PSC are based upon the Council's approval of the PSC reduction schedule for chinook salmon that was negotiated between principal domestic and foreign user groups (western Alaska residents and Japanese trawl industry representatives). A detailed description of the chinook salmon PSC amendments and the background information and rationale for them were offered to the public in the preamble to the proposed rule for Amendment 1a at 46 FR 53475.

Amendment 5 will be superseded by Amendment 3 when final rules for the latter take effect.

CLASSIFICATION:

The Assistant Administrator for Fisheries, NOAA, has determined that this amendment to the FMP is necessary and appropriate for the conservation and management of fishery resources in the Bering Sea and Aleutian Islands area, and that the action is consistent with the national standards of the Magnuson Act, other provisions of the Magnuson Act, and other applicable law. He has, therefore, under sections 304 and 305 of the Magnuson Act, initially approved Amendment 5 and the proposed rule to implement it.

The Environmental Impact Statement on the FMP that was filed with the Environmental Protection Agency addresses Amendment 3, of which Amendment 5 is a part, and is available from the Council at the address set forth above.

The Assistant Administrator has also determined that approval and implementation of this amendment will be carried out in a manner that is consistent, to the maximum extent practicable, with the Alaska Coastal Management Program, as required by section 307(c) of the Coastal Zone Management Act of 1972 and its implementing regulations, 15 CFR Part 930, Subpart C.

On the basis of criteria set forth in Executive Order 12291 (E.O. 12291), the Administrator, NOAA, has determined that Amendment 5 does not constitute a "major rule" requiring the preparation of a regulatory impact analysis. This rulemaking will not result in an annual effect on the economy of \$100 million or more; it will not result in a major increase in costs or prices for consumers, individuals, industries, Federal, State or local government agencies or geographic regions; and it will not result in significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of domestic-based enterprises to compete with foreign-based enterprises in domestic or export markets. The Administrator has further determined that the implementation of this amendment; (1) will adversely affect foreign interests exclusively, and (2) will not have a significant

economic impact on a substantial number of small domestic entities; thus it does not require the preparation of a regulatory flexibility analysis (5 U.S.C. 600 et seq.). Finally, this action does not increase the Federal paperwork burden for individuals, small businesses, and other persons under the Paperwork Reduction Act (44 U.S.C. 3501 et seq.).

List of Subjects in 50 CFR Part 611

Administrative Practice and Procedure

Fish

Fisheries

Date:

Robert K. Crowell
Deputy Executive Director
National Marine Fisheries Service

For the reasons set out in the preamble, it is proposed that 50 CFR Part 611 be amended as follows:

PART 611 - FOREIGN FISHING

1. The authority citation for Part 611 reads as follows:

Authority: 16 U.S.C. 1801 et seq., unless otherwise noted.

2. In Part 611, §611.93 is amended by revising paragraph

(c) (2) (ii) (D) to read as follows:

§611.93 Bering Sea and Aleutian Islands groundfish fishery.

* * * * *

(c) * * *

(2) * * *

(ii) * * *

(D) Chinook salmon prohibited species catch. During any fishing year, that portion of fishing area I lying between 55 degrees N. and 57 degrees N. latitude and 165 degrees W. and 170 degrees W. longitude and all of fishing area II may be closed for the remainder of the periods January 1 through March 31, and October 1 through December 31, to trawl vessels of any nation. This closure will occur when vessels of a nation

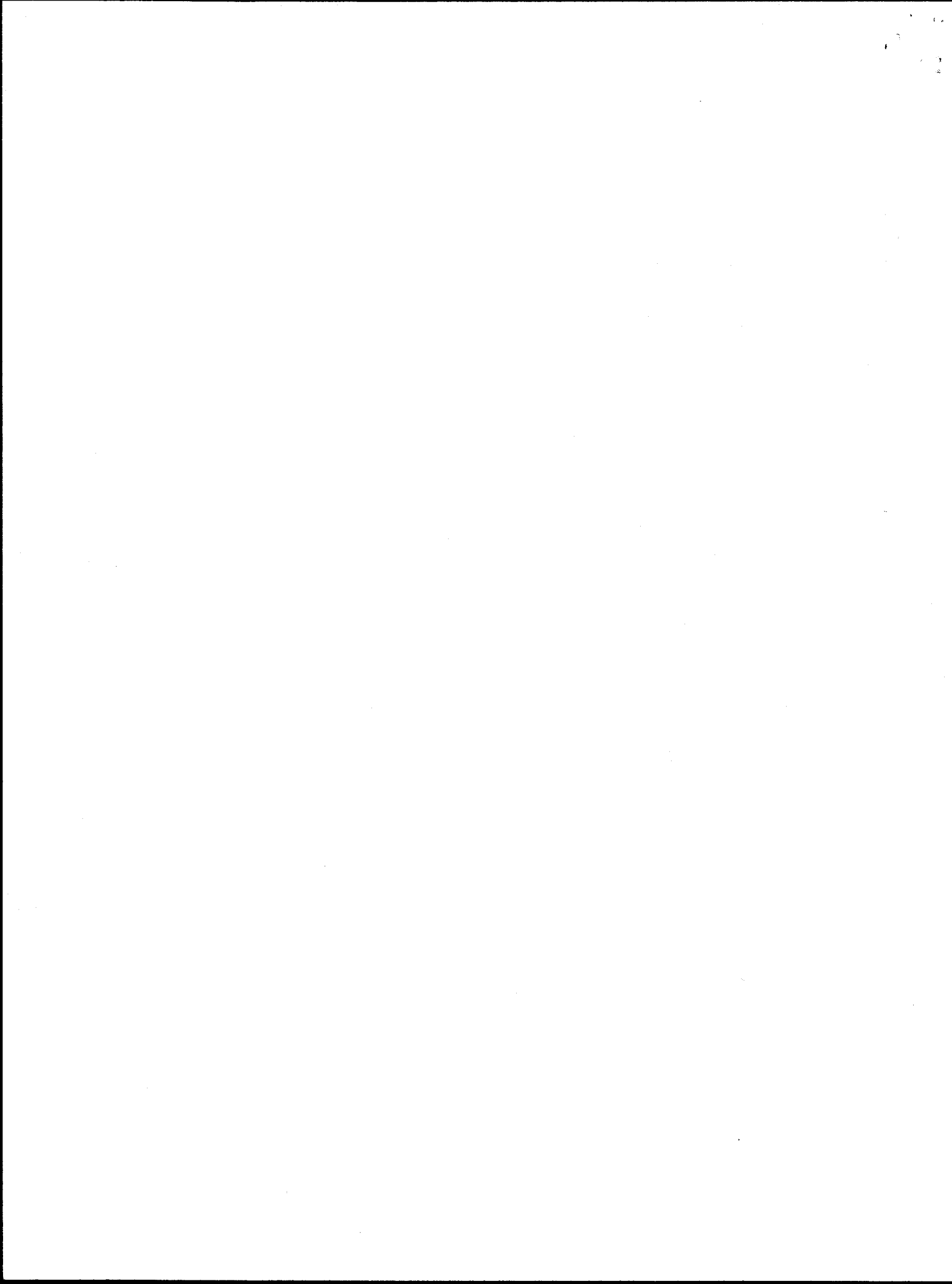
have intercepted that nation's portion of the prohibited species catch (PSC) of chinook salmon. A nation's initial portion of the chinook salmon PSC for a fishing year is determined by multiplying 45,500 (the total PSC for chinook salmon) by the ratio of that nation's initial groundfish allocation to the total initial TALFF plus reserves for groundfish:

Nation's initial chinook salmon PSC equals 45,500 multiplied by nation's initial groundfish allocation divided by total initial groundfish TALFF and reserve.

At the beginning of the fishing year, a portion of the chinook salmon PSC will not be distributed to nations because groundfish reserves will not be apportioned and some of the initial TALFF may not be allocated. This remaining portion of the chinook salmon PSC will be subsequently distributed to nations in proportion to increases in their groundfish allocations which result from the apportionment of the initial unallocated TALFF or groundfish reserves.

Fishing areas I and II are shown in §611.9, Appendix II, Figure 2.

* * * * *



NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

Bering Sea/Aleutian Islands Groundfish
Fishery Management Plan

Amendment #5

Changes to the FMP

The North Pacific Fishery Management Council (NPFMC) proposes the following change to the Bering Sea/Aleutian Islands Groundfish Fishery Management Plan (FMP) as amended by Amendment 5.

In Section 14, PROPOSED MANAGEMENT REGIME, replace Part 14.3.2.2., Prohibited Species, with the following:

14.3.2.2 Prohibited Species

A. General

The prohibited species listed in Annex VI may not be retained, and their taking must be minimized in the course of foreign groundfish fishing operations.

B. Conservation of Chinook Salmon

A prohibited species catch (PSC) for chinook salmon (Oncorhynchus tshawytscha) has been established of 45,500 fish.

A foreign nation's share of the chinook salmon PSC at the beginning of a fishing year is in the same proportion to the total chinook salmon PSC as its initial groundfish allocation is to the initial groundfish TALFF plus reserves, and is automatically established by the following equation: †

Nation's Initial Chinook Salmon PSC equals Total Chinook Salmon PSC multiplied by the Nation's Initial Groundfish Allocation divided by Total Initial Groundfish TALFF plus Reserves.

At the beginning of the fishing year, a portion of the chinook salmon PSC will not be distributed to nations because groundfish reserves will not be apportioned and some of the initial TALFF may not be allocated. This remaining portion of the chinook salmon PSC will be subsequently distributed to nations in proportion to increases in their groundfish allocations which result from the apportionment of the initial unallocated TALFF or groundfish reserves.

During any fishing year the salmon savings area, as described in Appendix III and shown as Figure 28, shall be closed for the remainder of the periods January 1 through March 31 and October 1 through December 31, to trawling by vessels of any nation whose vessels have intercepted that nation's portion of the PSC of chinook salmon.



22314
UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

MAR. 30 1983

F/AKR11:RB

TO: A - John V. Byrne
FROM: F *William G. Gordon*
SUBJECT: Final Approval and Implementation of Amendment 4 to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area--ACTION MEMORANDUM (by April 6, 1983)

I have given final approval of Amendment 4 to the Fishery Management Plan for the Bering Sea and Aleutian Islands Area Groundfish Fishery (FMP), and intend to make final regulations effective early this year. I recommend that you note my decision and transmit the attached final regulations to the Department of Commerce. This action is not controversial.

BACKGROUND

On October 28, 1982, I initially approved the amendment and its proposed regulations with one exception. The management measure in the amendment that would have authorized the Secretary of Commerce to issue field orders adjusting time and area closure was disapproved because the measure failed to specify adequately the procedures, limits, and types of responses that could be made in using the field order.

On November 4, you concurred with my determination that the action was not major with respect to Executive Order 12291. However, this action will have a significant economic impact on a substantial number of small entities for purposes of the Regulatory Flexibility Act. An environmental assessment was filed with the Environmental Protection Agency on March 3, 1982. Proposed regulations were published on December 6, 1982 (47 FR 54841). The comment period ended on January 20, 1983. No comments were received. Further background and the basis for the original determinations are in the action memorandum on the initial approval of the amendment (attached).

ISSUES

No new issues have been raised since my initial approval of Amendment 4.

OTHER MATTERS

I find the amendment to be consistent with the national standards for fisheries conservation and management, other provisions of the Magnuson Fishery Conservation and Management Act, and other applicable law.

F/M1





RECOMMENDATIONS

I recommend that you note my decision to implement the amendment by publishing final regulations. I also recommend that you sign the attached memorandum transmitting the regulations to the Department for clearance.

✓ I note your decision.

April 6, 1983
Date

for Anthony J. Celis
John V. Byrne
Administrator

Attachments

CLEARANCES

SIGNATURE AND DATE

F/AKR:RMcVey _____
ES: _____
GC:RMcManus _____
DA:ACalio _____

Drafted by: R. Berg, Plan Coordinator, F/AKR11, 8-907-586-7228, 1/18/83

cc: F(2), F/M1, F/M11(2), F/M12, GCF, ES, DA, GC, F/M31, F/M41, F/NWR, F/AKR, NEFMC, F/NWC, NPFMC

F/M11:NMFSPNEvans:634-7449:1/19/83:las (d) (ca bsal) (D12)
Revised:PNEvans:1/28/83:sj (f)





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

OCT 28 1982

F/CM6:PNE

TO: A - John V. Byrne

FROM: F William G. Gordon

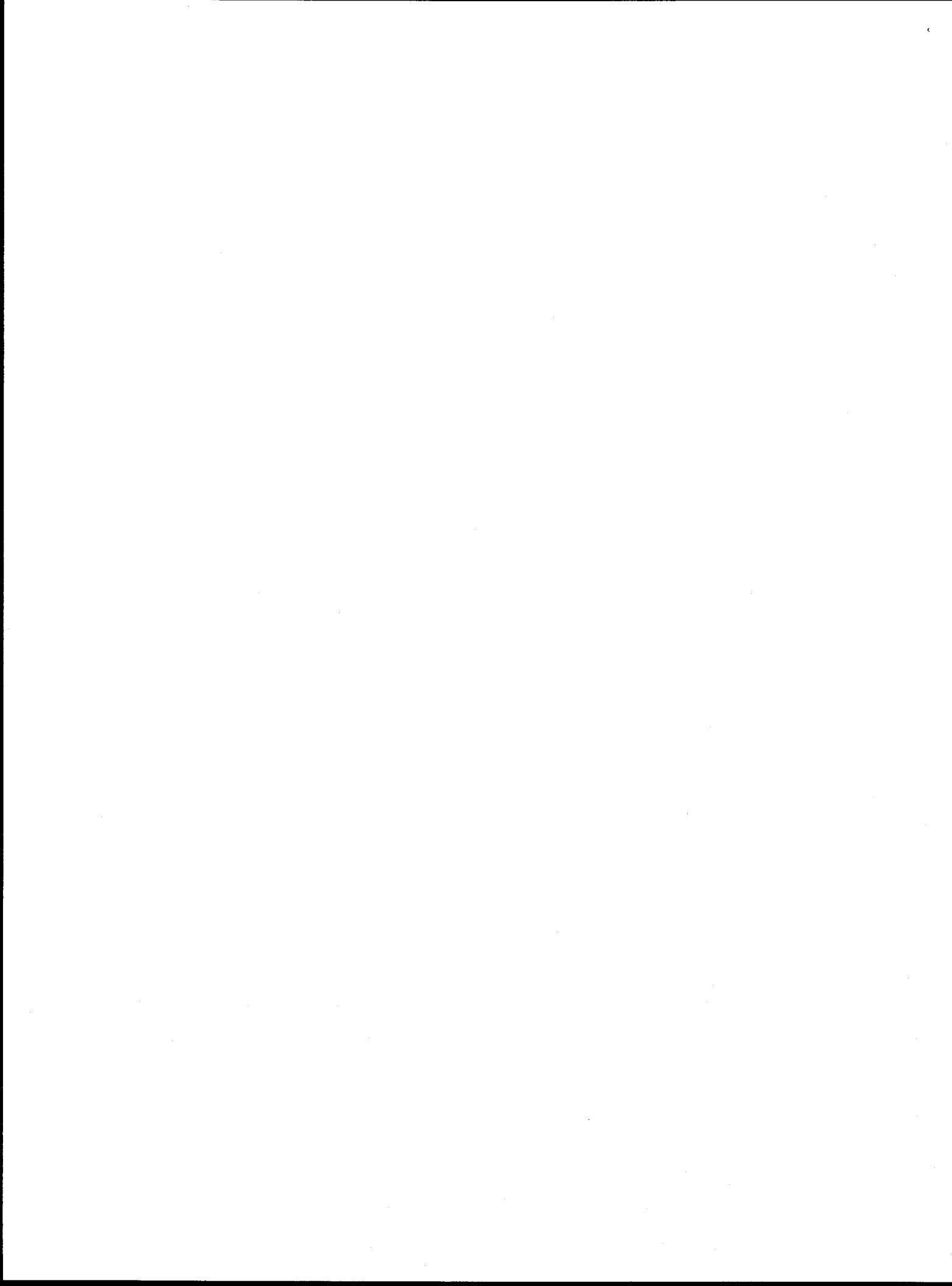
SUBJECT: Partial Approval of Amendment 4 to the Fishery Management Plan
for the Bering Sea and Aleutian Islands Groundfish Fishery--
ACTION MEMORANDUM (by November 5, 1982)

This memorandum advises you that I have partially approved Amendment 4 for the Fishery Management Plan for the Bering Sea and Aleutian Islands Groundfish (FMP). I have disapproved that part of the amendment that would have authorized the Secretary of Commerce (Secretary) to issue field orders adjusting time and area closures for conservation and management reasons. I also seek your concurrence on my initial determination that the subject amendment is not a major rule under Executive Order (E.O.) 12291, and request that you transmit to the Department's General Counsel both the E.O. 12291 determination and the notice of proposed rulemaking. I have made the initial determination, on the basis of an environmental assessment, that there is no need to prepare a supplement to the environmental impact statement for this FMP. I have also determined that this action does not call for any collection of information under the Paperwork Reduction Act of 1980. However, this action will have a significant economic impact on a substantial number of small entities for purposes of the Regulatory Flexibility Act (RFA). This action is not controversial and is moderately time critical.

BACKGROUND

The FMP is a multiyear plan that manages foreign and domestic fishing for a number of finfish commonly known as groundfish. Most of the fishery is conducted with on-bottom and off-bottom trawls and longlines at numerous fishing grounds throughout the eastern Bering Sea and Aleutian Islands area. Amendment 4 proposes to make the following four substantive modifications to the management regime stipulated in the FMP.. In addition, Amendment 4 includes certain editorial and technical changes; those changes are identified and discussed in the preamble to the proposed rule (attached).





1. Increase the joint venture processing (JVP) component of the expected domestic annual harvest (DAH) for pollock, yellowfin sole, "other flatfishes," Atka mackerel, and "other species," and reduce the total allowable level of foreign fishing (TALFF) for these species and species groups by equivalent amounts. The JVP for pollock in the Bering Sea is increased from 9,050 metric tons (mt) to 64,000 mt, yellowfin sole JVP is increased from 25,000 mt to 30,000 mt, "other flatfish" JVP is increased from 3,000 mt to 10,000 mt, Atka mackerel JVP is increased from 100 mt to 14,500 mt, and "other species" JVP is increased from 200 mt to 6,000 mt.

Rationale: Joint ventures are considered key factors in the development of a viable domestic groundfish fishery and a major portion of the total domestic groundfish harvest off Alaska is currently caught by U.S. vessels involved in joint venture operations. In the Bering Sea and Aleutian Islands area during 1981, U.S. fishermen delivered 78,490 mt of groundfish to foreign processing vessels, which was a 93 percent increase over the 40,690 mt delivered to foreign processors in 1980.

Present JVP amounts for certain species are considered inadequate in view of the current and projected growth of joint venture operations. In addition, the current catches and expressed intentions of U.S. fishermen indicate that allocations from "reserve" amounts alone will not be sufficient to permit continued fishing under these arrangements. Reapportioning portions of optimum yield (OY) to DAH (and JVP) for certain target and incidental catch species will satisfy the projected needs of the growing domestic fishery and will allow joint ventures to continue fishing. These portions of OY, which presently are designated as part of TALFF, have not been allocated to foreign fishermen; hence, foreign fishing operations will not be disrupted by this aspect of Amendment 4.

Recent testimony to the North Pacific Fishery Management Council by individuals representing the U.S. fishing industry indicates that the current amount of groundfish established as available for domestic annual processing is sufficient. It is appropriate, therefore, to allocate the entire increase in DAH proposed in Amendment 4 to JVP.

2. Increase the acceptable biological catch (ABC) for Pacific cod from 160,000 mt to 168,000 mt and increase the OY from 78,700 mt to 120,000 mt. As a result of the increase in OY, the TALFF for Pacific cod is increased from 31,500 mt to 70,735 mt and the reserve is increased from 3,935 mt to 6,000 mt. In addition, the ABC for "other species" is

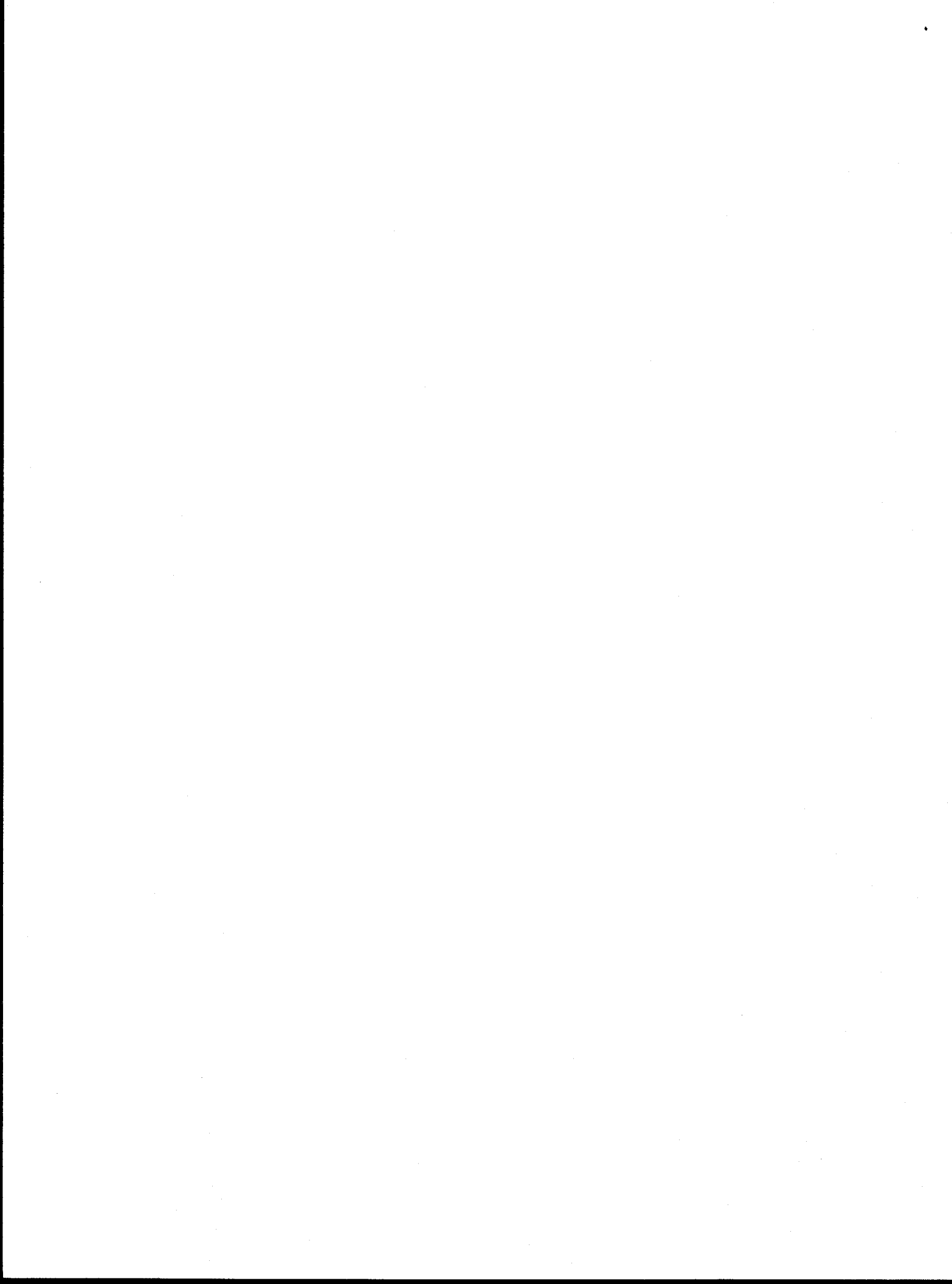


increased from 74,249 mt to 79,714 mt and the OY is increased from 74,249 mt to 77,314 mt. Accordingly, the amount of "other species" held in reserve is increased from 3,712 mt to 3,866 mt; the TALFF, however, is decreased to 65,648 mt (since the JVP component of DAH is being increased by a greater amount).

Rationale: Analyses of National Marine Fisheries Service (NMFS) surveys of the Pacific cod resource in the Bering Sea and Aleutian Islands area since 1978 indicate the 1977 year class is unusually abundant. The ABC established for 1981 was 160,000 mt, but analyses of information collected during the 1981 NMFS survey support an 8,000 mt increase in ABC for 1982, for a total of 168,000 mt. The biomass of the strong 1977 year class probably peaked at age three in 1980, but the fish were not fully recruited into the fishery until age four. The increase in Pacific cod biomass is expected to decline in immediate future years and it is desirable to harvest the 1977 year class before natural mortality substantially reduces its abundance. Therefore, the OY for Pacific cod is being increased from 78,700 mt to 120,000 mt. Because of the relatively undeveloped state of stock assessment techniques and accompanying likelihood of inaccuracy, it would not be desirable to raise the OY to a level equal to the 168,000 mt ABC. This would risk harm to the Pacific cod resource should the ABC estimate for 1982 turn out to have been too high.

The ABC and OY amounts for the species category "other species" is established as five percent of the combined ABCs and OYs of specified target species or species groups. Therefore, the increase in the ABC and OY amounts for Pacific cod results in an increase in the ABC amount for "other species" from 74,249 mt to 79,714 mt. The OY amount for "other species" is similarly increased from 74,249 mt to 77,314 mt. The amount of "other species" held in reserve, or five percent of the "other species" OY, is increased by 154 mt from 3,712 mt to 3,866 mt. Since the JVP component of DAH for "other species" is being increased by 5,800 mt, the portion of OY apportioned to TALFF must be decreased by 2,889 mt to 65,648 mt.

3. Allow foreign fishing between three to 12 nautical miles from the baseline used to measure the U.S. territorial sea in the area bounded by 170°00' W. and 172°00' W. longitude on the south side of the Aleutian Islands and by 170°30' W. and 172°00' W. longitude on the north side of the Aleutian Islands. In addition, foreign longlining is allowed between three and 12 miles from the baseline in the area bounded by 170°00' W. and 170°30' W. longitude north of the Aleutian Islands.



Rationale: Foreign fishing between three and 12 miles from the baseline used to measure the territorial sea is being allowed in areas north and south of the Aleutian Islands, as described above, because of the narrow breadth of the continental shelf in these areas and the impracticability of fishing for groundfish outside of 12 miles. Foreign trawling between three and 12 miles is prohibited north of the Aleutian Islands in the area between 170°00' W. and 170°30' W. longitude to avoid gear conflicts and ground preemption problems between U.S. crab fishermen who use this area and foreign trawl fleets.

4. Authorize the Secretary or his designee to issue field orders adjusting time and area closures for conservation and management reasons.

Any such modification shall be based upon a finding that the condition of any groundfish or prohibited species stock in any part of the management area is substantially different from the condition anticipated in the FMP, and that this difference reasonably requires a modification of time or area limitations if groundfish or prohibited species are to be adequately conserved and managed.

Rationale: As stated in the Amendment, the rationale for this measure is that it would allow the Secretary "to take immediate conservation measures to protect groundfish or prohibited species stocks by adjusting fishing areas or seasons if unanticipated stock conditions are revealed in season."

ISSUES

ISSUE 1: Should the 120,000 mt OY Proposed for Pacific Cod in Amendment 4 be Increased to a Level Which Equals, or More Closely Approaches, the U.S. Estimate of ABC?

Japanese scientists estimate the current ABC for Pacific cod at 293,800 mt, whereas U.S. scientists estimate the current ABC at only 168,000 mt. In view of this disparity, should the 120,000 mt OY proposed for Pacific cod in Amendment 4 be increased to a level which equals, or more closely approaches, the U.S. estimate of ABC?

Given the current state of scientific knowledge and methods, there is uncertainty in the abundance estimates of various groundfish stocks. This problem is exemplified by the disparity between U.S. and Japanese estimates of Pacific cod ABC. In view of this situation and possible inaccuracies in the data upon which the ABC estimate is based, the 120,000 mt OY proposed for Pacific cod in Amendment 4 is conservatively set below the 168,000 mt ABC. Although increasing the Pacific cod OY over the proposed amount would probably provide for a fuller use of the 1977 year class before its natural demise, the



risk of damage to Pacific cod stocks due to overharvest would be increased. A substantially higher OY could also lead to a reduced catch per unit of effort, making it more difficult for U.S. fishermen to expand into this part of the groundfish fishery. For these reasons, I do not recommend that the Pacific cod OY be raised to a level greater than the proposed amount of 120,000 mt.

ISSUE 2: Would the Proposed Increase in Pacific Cod OY have a Significant Impact on the Total World Supply of Codfish?

The socioeconomic impact on the world production of codfish associated with increasing the Pacific cod OY to 120,000 mt would be insignificant, since the 41,300 mt increase in OY represents less than two percent of the total world supply of codfish, based on preliminary 1981 catch statistics. To the extent that the increase in Pacific cod OY is not fully harvested, any economic impacts of the OY increase would be proportionally diminished. Even if the most optimistic rates of exploitation are assumed, the increase in landings as a result of the modified Pacific cod OY would be expected to provide no discernable changes in either product availability or price on world markets. Neither would the OY change produce any measurable variation in codfish market shares among producing nations.

ISSUE 3: Disapproval of Management Measures Pertaining to Field Order Authority

Amendment 4 would authorize the Secretary to "issue field orders modifying the time and area restrictions prescribed in [the FMP]" for foreign and domestic fishing if the two criteria described in the "Background" section of this memorandum were met. We support the purpose of this portion of the Amendment. It is consistent with the NMFS policy of encouraging flexibility in fishery management plans. However, there are several problems with this aspect of Amendment 4.

The most serious of these problems is that the amendment does not specify (or specifies inadequately) the procedures, limits, and types of responses that could be made in using the field order. This is contrary to previously issued guidelines that state that the Secretary's regulatory authority must be carefully described in the FMP so as to ensure that the Secretary's actions are limited to implementing the FMP. This and other problems which are discussed briefly in the preamble to the proposed regulations (attached) preclude approval of this portion of Amendment 4. Concurrent with this disapproval of the measure, I am sending the Council a letter detailing the full extent of our concerns with the field order authority.

ISSUE 4: Magnuson Fishery Conservation and Management Act (Magnuson Act) Considerations

In accordance with section 304(b) of the Magnuson Act, I have determined that, with the exception of the portion of Amendment 4 pertaining to field order authority, the Amendment is consistent with the national standards and other provisions of the Magnuson Act, and other applicable law.



ISSUE 5: National Environmental Policy Act Considerations

I have determined, and the Office of Ecology and Conservation in NOAA's Office of Policy and Planning has concurred, that the proposed amendment will not significantly affect the quality of the human environment. These determinations were based on an Environmental Assessment that was filed with the Environmental Protection Agency on March 3, 1982. Accordingly, a supplement to the FEIS for the FMP is not required.

ISSUE 6: Determination that the Proposed Rule is not Major Under E.O. 12291

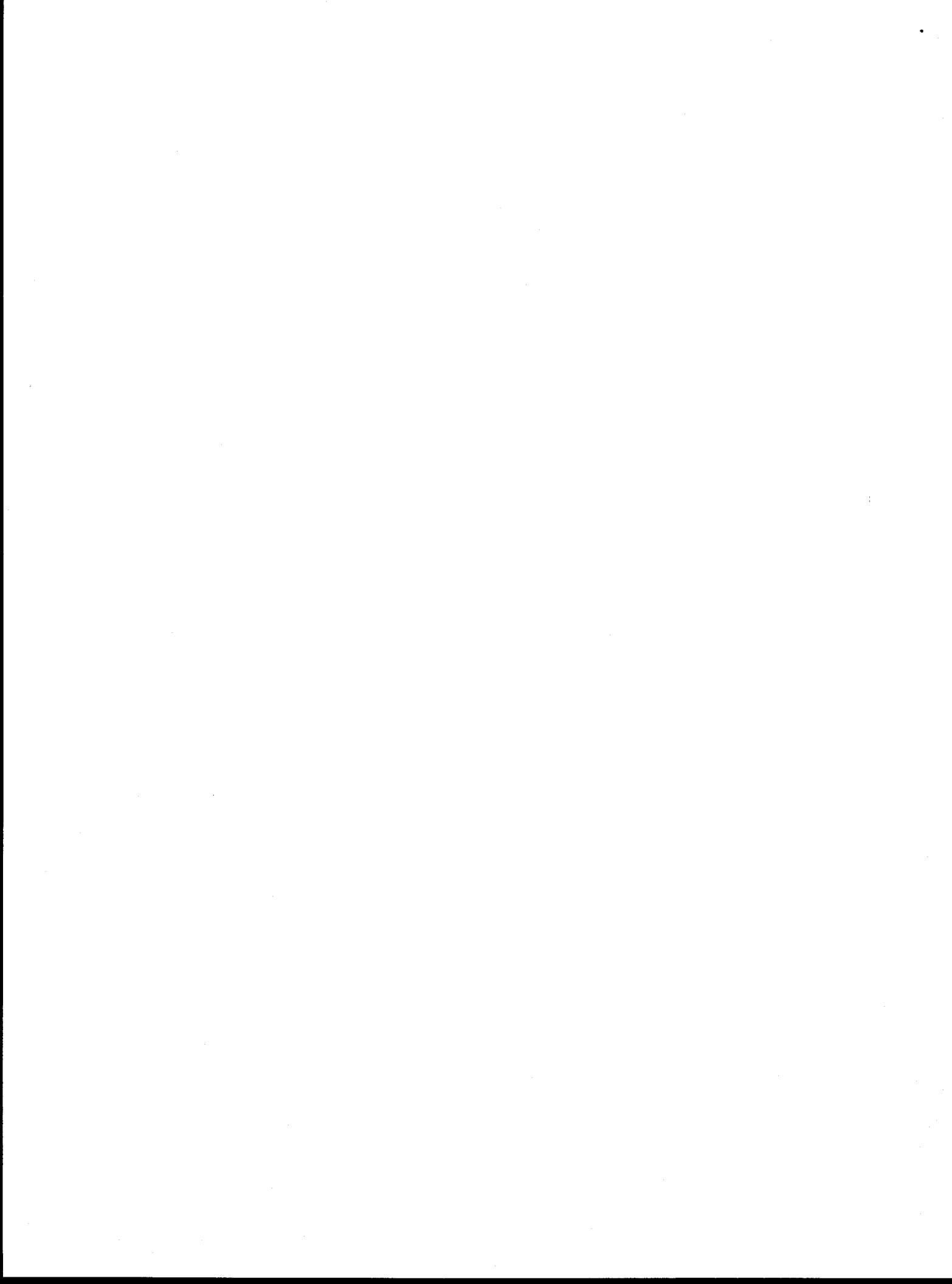
Rules to implement Amendment 4 will not result in:

- (1) an annual effect on the economy of \$100 million or more;
- (2) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or
- (3) significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of United States-based enterprises to compete in domestic or export markets.

By providing additional amounts of groundfish for domestic harvest, Amendment 4 will allow the domestic groundfish fishery to expand as rapidly as market conditions warrant.

The proposed increases in JVP amounts for pollock, yellowfin sole, "other flatfishes," Atka mackerel, and "other species" would result in an 87,150 mt increase in the total JVP available to domestic fishermen. The mean ex-vessel value of these species to domestic fishermen fishing for joint venture operations has recently been about \$141 per mt. Assuming that all of the 87,150 mt increase in JVP is harvested, the additional total gross revenues to the 30 U.S. vessels that are projected to deliver groundfish to foreign processors in 1982 could approach \$12.3 million.

The proposed increases in JVP amounts for pollock, yellowfin sole, "other flatfishes," Atka mackerel, and "other species" would result in a corresponding decrease in the TALFF amounts for these species. Assuming that all of the 87,150 mt decrease in the TALFF would have been harvested by foreign fishermen, the loss in revenue to the United States through foreign fishing fees assessed on groundfish harvested by foreign fishermen would approximate \$1.7 million. This loss, however, would be offset by the proposed 39,235 mt increase in TALFF for Pacific cod, a higher value species. Given the current poundage fee of \$45 per mt of Pacific cod, and assuming that all of the increase in Pacific cod TALFF is harvested, the additional revenue to the United States approaches \$1.8 million for a net increase of \$100,000.



ISSUE 7: Consistency with the Regulatory Flexibility Act (RFA)

The RFA is designed to ensure that the impacts of proposed rules on small businesses and other "small entities" are taken into account during the rulemaking process. The RFA requires that the agency head determine whether the proposed rules will have a significant economic impact (positive or negative) on a substantial number of small entities. If so, the agency must prepare an initial regulatory flexibility analysis (IRFA). On the basis of the analysis presented in Issue 6, I have determined that the proposed rules will have a significant economic impact on a substantial number of domestic small entities because of the potential increase of revenues to the fishery under the Amendment.

This action memorandum, together with the Environmental Assessment, constitutes the IRFA required by the RFA. This use of analyses contained in other documents is authorized by section 605(a) of the RFA.

RECOMMENDATION

I recommend that you note my determination that the approved portions of Amendment 4 are consistent with the national standards and other provisions of the Magnuson Act, and other applicable law, and that you concur in my determination that the rules to implement Amendment 4 are not major under E.O. 12291. If you concur, please sign the attached transmittal to the Department of Commerce's General Counsel, and send forward the proposed regulations, this action memorandum, and the Environmental Assessment as attachments thereto.

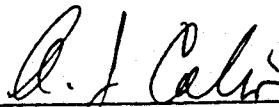
CONCURRENCE

☒ I concur with your determinations.

☐ I do not concur.

Date

11/4/82


John V. Byrne
Administrator, NOAA

Attachment

CLEARANCES

SIGNATURE AND DATE

for F/AKR:RMcVey

ES:STinkham

GC:RMcManus

DA:ACalio

Chen Buhai (per telecon w/childhood) 10/13/82

Drafted by: P.N.Evans, Ass. Plan Reviewer, F/CM6, 634-7449, 9/2/82:sj



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

THE ADMINISTRATOR

NOV 4 1982

TO: Sherman Unger
General Counsel, DOC

FROM: John V. Byrne *A-J. Celis*
Administrator, NOAA

SUBJECT: Proposed Regulations for Bering Sea/Aleutian Islands
Groundfish, Amendment No. 4

In compliance with Departmental Organization Order 10-6, I am forwarding for your review the attached regulatory action. I have determined that this regulatory action is consistent with E.O. 12291, the Regulatory Flexibility Act and the Paperwork Reduction Act.

Any questions on this regulatory action should be directed to Donna D. Turgeon, National Marine Fisheries Service (634-7432). Please notify Donna Turgeon by telephone when you have approved the regulatory action, and return the attached copy of this memorandum after noting the docket number.

Docket Number ()

Attachment

cc: F, F/CM, F/CM6(2), F/CM7, Fx31, ES, GCF, A, DA, AA, GC
NMFS:F/CM6:RWSurd1:634-9449:10/5/82:hek



10TH ANNIVERSARY 1970-1980

National Oceanic and Atmospheric Administration

A young agency with a historic
tradition of service to the Nation



December 7, 1982

F/M11:RAS

TO: Frank Swain
Chief Counsel for Advocacy
Small Business Administration

FROM: *Joe Clem, Jr.*
Roland Finch,
Acting Director, Office of
Fisheries Management

SUBJECT: Determination of Significant Regulations for Bering Sea/Aleutian
Islands Groundfish, Amendment No. 4

In accordance with the Regulatory Flexibility Act (P.L. 96-354), Section 605(b), the Administrator of the National Oceanic and Atmospheric Administration has determined that the proposed regulations for Bering Sea/Aleutian Islands Groundfish, Amendment No. 4 "will have a significant economic impact on a substantial number of small entities."

The requirements under Section 603(a) of the Regulatory Flexibility Act for an initial regulatory flexibility analysis are satisfied by the analytical sections contained in the attached environmental assessment and action memorandum. This approach is used by the National Marine Fisheries Service to comply with the requirements of the Magnuson Act, the Regulatory Flexibility Act, and Executive Order 12291.

If you have any questions concerning the enclosed analysis, please contact Richard W. Surdi, Senior Economist (202/634-7449).

Attachments





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

F/M1:PHF:634-7218

17 March, 1983

TO: F/M11 - Clem Bribitzer

FROM: F/M1 - Peter Fricke

SUBJECT: Amendment 3 to the FMP for Bering Sea Groundfish

I have reviewed the amendment package and have no comments to make vis-a-vis possible sociological impacts.





UNITED STATES DEPARTMENT OF COMMERCE
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Washington, D.C. 20235

FEB 9 1983

F/M11:CB

TO: Distribution*

FROM: *for* F/M11 - Mary H. Thompson *Clem B. Britzer*

SUBJECT: Amendment 3 to the Fishery Management Plan for Bering
Sea Groundfish

The subject amendment package is enclosed for your review and comment. This is the first action to fall under the new review procedures in the Magnuson Act as amended by P.L. 97-453. The focus and timing of your comments is altered somewhat from previous patterns.

Proposed regulations submitted by the North Pacific Fishery Management Council are scheduled to be filed with the Office of the Federal Register on March 8 (see attached schedule). Your comments on the proposed regulations are needed by February 16 if they are to be considered. The focus of comments on the preamble and proposed regulations should be on consistency with the amendment, Federal Register format, and clarity, not on the approvability of the amendment.

The approvability of the amendment will be discussed at an issues meeting tentatively scheduled for April 7, 1983. The Region will need your comments by Friday, March 18, 1983, to consider them in its drafting of the decision document. The comments due March 18 should focus on the approvability of the amendment. Please address your comments to me with a cc to F/AKR1-Chitwood.

Questions on this amendment may be addressed to Clem Bribitzer, 634-7449 (for the amendment itself) or A.J. Bilik, 634-7432 (on the regulations).

Attachment

*Distribution

F/M1 - Fricke

F/Mx1

F/CA

F/M42

F/S1

PP/EC

GC - Brennan

F/M11 - Surdi, Martenson, Magill
w/o attachment

F/M2

F/M3

F/M41

F/S3

F/S2

F/PP

F/M12 - w/o attachment

GCF

N/ORM4 - Evans

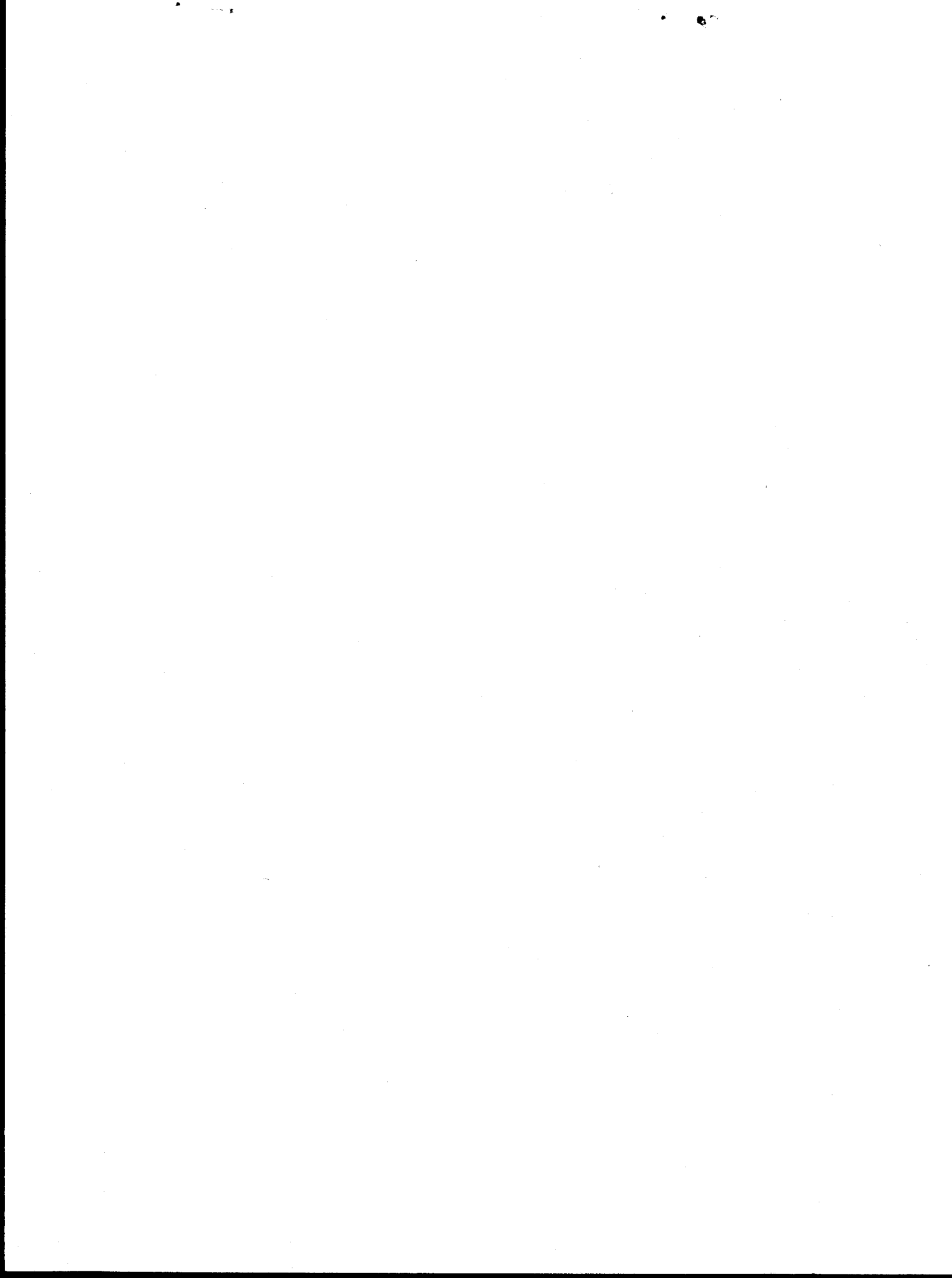
2-9-83
F/M11





Tentative Schedule
Bering Sea Groundfish Amendment 3

Event	Date
Receipt Date	February 7
Conference Call on Proposed Regulations	February 18
F signs transmittal Memo	February 25
OMB/DOC concurs	March 7
Proposed Regulations Filed in <u>Federal Register</u>	March 8
Public Comment period ends	April 22
Council notified of Approval/Disapproval	May 12
Final Regulations filed in <u>Federal Register</u> .	May 27



North Pacific Fishery Management Council

Clement V. Tillion, Chairman
Jim H. Branson, Executive Director

605 West 4th Avenue
Anchorage, Alaska 99510



Mailing Address: P.O. Box 3136DT
Anchorage, Alaska 99510

Telephone: (907) 274-4563
FTS 271-4064

January 18, 1983

Mr. William G. Gordon
Assistant Administrator
NMFS
3300 Whitehaven, Page Bldg 2
Washington, D.C. 20235

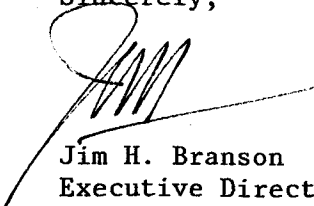
Dear Bill:

Here are fifty copies of Amendment #3 to the Bering Sea/Aleutian Islands Groundfish Fishery Management Plan. The amendment will reduce the incidental catch of prohibited species in the foreign trawl fisheries. It also formalizes the Council's policy of encouraging the domestic trawl fisheries by promoting voluntary actions to control their incidental catch of Pacific halibut, king crab, Tanner crab and salmon.

The enclosed package contains the Federal Register Notice, changes to the Code of Federal Regulations, changes to the Fishery Management Plan and the Regulatory Impact Review/Regulatory Flexibility Analysis. We have been advised by GCAK that the Environmental Impact Statement for the fishery management plan adequately discusses the incidental catch of prohibited species and management measures to reduce it, and that no additional environmental documentation is necessary.

Amendment #3 has been designed to work equally well with the current FMP, or with Amendment #1. It was approved by the Council in September 1981 after two years' development, and has been refined over the past year by the Regional office, GCAK and Council staff. This is an important action and should be implemented as soon as possible.

Sincerely,



Jim H. Branson
Executive Director
JP

cc: Robert McVey
Patrick Travers



NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

Bering Sea/Aleutian Islands Groundfish
Fishery Management Plan

Amendment #3

Changes to the FMP

1. Add the following to the "List Of Tables" in the Table of Contents, after Table 26.

26.1--Incidental Catch Rate Reduction for Pacific halibut, king crab and Tanner crab, Based on the Average 1977-1980 Foreign Trawl Groundfish and Prohibited Species Catch

26.2--Target Reduction Schedule of Salmon Prohibited Species Catches Based on the Average 1977-1980 Foreign Trawl Salmon Incidental Catch

2. Add the following to Section 13.2 Total Allowable Level of Foreign Fishing (TALFF):

All allocations to TALFF are subject to the management measures prescribed in this FMP, including, in the case of TALFF, prohibited species catch (PSC) restrictions.

3. Add Table 26.1 in Section 14.5.2

Table 26.1--Incidental catch rate reductions for Pacific halibut, king crab and Tanner crab, based on the average 1977-80 foreign trawl groundfish and prohibited species catches.

Year	Halibut ^{1/}	King Crab ^{2/}	Tanner Crab ^{2/}
<u>Base Catch Rates</u>			
1977-80	3,182	916,804	16,003,329
Average	1,301,250	1,301,250	1,301,250
	base R=0.00245	base R=0.70456	base R=12.29843
<u>Rate Reduction Schedule, R</u>			
(1981)	--	--	--
(1982)	R=.00220 90%	R=.66933 95%	R=11.6840 95%
(1983)	R=.00196 80%	R=.63410 90%	R=11.0686 90%
(1984)	R=.00171 70%	R=.59887 85%	R=10.4537 85%
(1985)	R=.00147 60%	R=.56365 80%	R= 9.8387 80%
(1986)	R=.00122 50%	R=.52842 75%	R= 9.2238 75%

^{1/} Metric tons per metric ton of groundfish.

^{2/} Number of individuals per metric ton of groundfish.

4. Add Table 26.2 in Section 14.5.2

Table 26.2--Target reduction schedule of salmon prohibited species catches based on the average 1977-80 foreign trawl salmon incidental catch.

Year	Chinook	Salmon Total Salmon ^{1/}
<u>Base Numbers</u>		
1977-80	74,400	80,000
<u>Reduced Catch Levels</u>		
(1981)	65,000	69,893
(1982)	55,250	59,409
(1983)	45,500	48,925
(1984)	to be determined	
(1985)	to be determined	
(1986)	16,250	17,473

^{1/} Total salmon numbers are calculated on the assumption that 93% of incidentally-caught salmon are chinook.

Note: A full and complete review of the salmon incidental catch reduction program will be conducted in 1983 to determine what the salmon incidental catch limits should be thereafter. This review will consider the status of the salmon resource, the economic and technological possibility of further incidental catch reductions, and other relevant matters. The review would also consider the economic and technological reasonableness of the goal set out above.

5. Replace Section 14.4.2 Prohibited Species with the following:

14.4.2 Prohibited Species

A. General

United States vessels must minimize their incidental harvest of Pacific halibut, salmon, Tanner crab, and any other species the fishery for which in the area governed by this FMP is governed by another FMP, and may not retain such species unless authorized to do so under that other FMP.

B. Objective

The objective of this section is to provide an environment which is supportive of domestic harvesting of groundfish with an awareness of principles and techniques for minimizing incidental catches of Pacific halibut, salmon, Tanner crab, and other species the fishery for which in the area governed by this FMP is governed by another FMP. Upon implementation of the Bering Sea/Aleutians King Crab FMP, these species will include king crab.

C. Guideline

Procedures chosen for controlling the incidental catch of prohibited species should provide incentives and opportunities for fishermen to modify their gear, fishing techniques, or whatever else is appropriate to result in long-term incidental catch reductions.

D. Policy

The North Pacific Fishery Management Council believes that domestic fishermen targeting on the groundfish fisheries of the Bering Sea and Aleutians share a responsibility to avoid to the fullest extent practicable the incidental taking of halibut, salmon, king crab, and Tanner crab. They also share with the North Pacific Fishery Management Council a responsibility to develop an accurate information base concerning these species through maintenance of logbooks, accurate reporting of catch, and contributions to knowledge of fish distribution, behavior, etc.

The North Pacific Fishery Management Council advocates and strongly supports development of domestic harvesting and processing of the groundfish of the Bering Sea and Aleutian Islands. To avoid any unnecessary impediments to that development, the Council will not at this time recommend any regulations of the domestic fishery specifically designed to protect "prohibited" species. However, the Council also is fully committed to protection from needless waste of stocks of salmon, halibut, king crab, and Tanner crab which are fully utilized in other domestic fisheries. Furthermore, in accordance with MFCMA provisions, the Council has a continuing obligation to assure their management in accordance with optimum use objectives. Therefore, the Council charges domestic fishermen to develop their fishing strategies, techniques, and practices with full regard for

and attention to the objectives of the Council for protection of species not properly a target of those groundfisheries, as demonstrated by the measures taken to assure protection by foreign fleets. The Council urges domestic fishermen to study the techniques used by foreign fleets to meet Council requirements for protection of non-target species, to adapt those techniques where appropriate for domestic use, and to experiment actively with gear modifications, selection of time and area fishing strategies designed to avoid concentrations of prohibited species, and other techniques designed to develop a clean fishery. The Council will work with domestic fishermen to facilitate transfer of useful information and technology from foreign sources, and to insure the collection of relevant fisheries data and information from all sources, foreign and domestic.

The Council will follow the development of Bering Sea and Aleutian Islands groundfish fisheries with much interest, and with particular attention to the success of those fisheries in avoiding unnecessary or excessive taking of prohibited species.

The Council hopes that through voluntary measures developed with the cooperation of domestic fishermen, stocks of salmon, halibut, king crab, and Tanner crab can be sufficiently sequestered from needless and wasteful bycatch to make unnecessary the imposition of special protective regulations upon the domestic groundfish fishery.

6. Replace Section 14.5.2, Prohibited Species with the following:

14.5.2 Prohibited Species

A. General

The prohibited species listed in Section 14.2.B.1 and in Annex VI may not be retained, and their taking must be minimized in the course of foreign groundfish operations.

1. Purpose

The purpose of this section is to reduce the amount of prohibited species taken incidentally in the extensive foreign groundfish fisheries operating in the management area.

2. Objectives

The objective of this section is to effect incremental reductions in the catch of prohibited species by the foreign groundfish fisheries consistent with the need to provide opportunities to catch the TALFF of groundfish and consistent with the considerations in part "E" of this section.

3. Guideline

The procedures chosen for controlling the incidental catch of prohibited species should provide incentives and opportunities for fishermen to modify their gear, fishing techniques, or

whatever is appropriate to reduce the incidental catch of prohibited species so that long-term solutions will result from their actions.

4. Restricted Gear

The management regime prescribed in this section applies to all foreign trawl fisheries in the FMP management area. The foreign longline fisheries are exempted from the management measures prescribed for salmon, Pacific halibut, king crab, and Tanner crab in this section. The foreign longline fishery will be monitored closely for its impact on these species.

The Secretary, after consultation with the Council, shall include foreign longliners in regulations promulgated under this section if they are determined to have a detrimental impact on prohibited species.

B. Target Reduction Schedule of Prohibited Species Catch Rates for Pacific Halibut, King Crab, and Tanner Crab.

This part establishes target prohibited species catch rates for Pacific halibut, king crab, and Tanner crab, and provides that elements of the foreign groundfish fishery may be closed if the resulting prohibited species catches (PSCs) are exceeded. Prohibited species catch rates will be gradually reduced over a fixed period, with the intent to reduce total PSCs.

PSCs will be determined each year based on target catch rates and the amount of TALFF available each year. They may be further adjusted according to the considerations listed in part "E" of this section.

Target catch rates have been established by following three steps:

- (1) determination of base PSC rates for measurement;
 - (2) determination of target rate and period of reduction; and
 - (3) determination of the annual percentage rate of reduction.
1. Base PSC rates for measurement. The average incidental catch of prohibited species and the average trawl groundfish catch by foreign nations during 1977-80 were used to calculate the catch rate (prohibited species/total groundfish) as the base level rates for each prohibited species from which PSCs were determined.
 2. Target rates and period of reduction. Target rate and period of reduction for each prohibited species vary and were determined as follows:

Pacific halibut - 50% reduction in 5 years.

Rationale: This reduction was chosen by the Council rather than a more stringent one because of the difficulty of avoiding halibut in the yellowfin sole fishery.

King and Tanner Crabs - 25% reduction in 5 years.

Rationale: This reduction was chosen by the Council to accurately reflect conditions in these fisheries, i.e. (1) the slight biological impact of the incidental catch on the crab populations, and (2) the lesser socioeconomic impact of the incidental catches on the domestic crab fishing industry. As reported in Reeves (1981, Council Document #13) most of the crab taken are golden king crabs (72-91% of king crab by-catch) and Chionoecetes opilio (59-76% of Tanner crab by-catches).

3. Annual percentage rate of reduction. A straight line schedule of reduction from the base catch rates was adopted to derive annual target rates (R) for incidental catch of each prohibited species, as shown in Table 26.1.

Based on current information, Council Document #13 (1981), the established catch rates in Table 26.1 will fulfill the objective of Part "A" of this section. However, it is conceivable that changes to the stocks and the fishery could occur, in which case the established catch rates may no longer meet the objective and therefore shall be adjusted as described in part "E" of this section.

C. Annual Determination of PSC Levels for Pacific Halibut, King Crab, and Tanner Crab.

The incidental catch rate reduction schedules for halibut and crabs are expressed as percentage reductions of the average 1977-80 incidental catch rates (weight or number of prohibited species per metric ton of groundfish caught). Since the amount of TALFF and reserves cannot yet be determined by year (year i), the absolute amount of PSC for halibut and crabs (species j) will be determined each year as follows:

$$PSC_{ij} = R_{ij} \times TALFF$$

Using this formula, the PSC for halibut and crabs will increase throughout the year as TALFF is increased through the apportionment of groundfish reserves and surplus DAF to TALFF.

The calculated PSCs will be reviewed annually and may be adjusted by the Regional Director, in consultation with the Council, as provided for in the annual review process of part "E" of this section.

When the Regional Director projects that a nation's groundfish allocation may not be reached due to premature achievement of PSC he will caution the nation to avoid further interception of prohibited species. Once the final PSC for halibut, king crab or Tanner crab is reached, the entire management area shall be closed to trawling

by vessels of the affected nation, except to the extent exempted by the Regional Director for selected elements of the fleet to continue fishing as provided for in part "G" of this section.

D. Reducing the PSC of Salmon

The salmon catch reduction schedules in Table 26.2 are for chinook salmon and for all species of salmon combined. The chinook salmon incidental catch equals 93% of the all salmon incidental catch. The reduction schedule approved by the Council for chinook salmon was negotiated between the principal domestic and foreign user groups, western Alaskan residents and Japanese trawl industry representatives.

Salmon PSCs are indicated for 1981, 1982, and 1983. PSCs for 1984 and 1985 may be reduced further for the purpose of achieving an objective of a 75% reduction from the 1981 level within five years, i.e., 16,250 chinook salmon and 17,473 for all salmon combined for the 1986 fishing year.

The salmon PSCs will be reviewed annually in accordance with part "E" of this section and a full and complete review of the salmon PSC reduction program shall be conducted in 1983 to determine the PSCs to be established thereafter. The review will consider the status of the chinook salmon resource, the economic and technological possibility of further PSC reductions, the economic and technological reasonableness of the goal for 1986, and other relevant matters.

The PSC reduction schedule for salmon is subject to the following conditions:

1. A rolling PSC limit which fixes the by-catch levels over a period of three successive years, will be in effect. In any year, a nation's incidental salmon catch may exceed the specified limit by up to 10%.

Provided that the total incidental catch by that nation in any consecutive three-year period does not exceed the sum of the PSC limits for those three years.

Note: All calculations of the rolling PSC limit shall start with the 1982 fishing season, regardless of when this section is implemented by the Secretary.

2. Once the rolling PSC limit is reached for salmon, Fishing Area II will be closed to trawlers of the affected nation, as well as that part of Fishing Area I lying between 55°N and 57°N latitude and between 165°W and 170°W longitude for so much of the months of January, February, March, October, November, and December which remain in that fishing year.
3. If any more salmon are caught in the areas which remain open, those catches will be deducted from the next year's salmon PSC of the affected nation consistent with the rolling PSC limit.

E. Annual Review and Adjustment of PSCs

Since fisheries resources and socioeconomic conditions of the fishing community are expected to change, the PSC management system will be reviewed annually by the Council and the calculated PSCs and may be adjusted by the Regional Director, as a result of the Council's review. The annual review of calculated PSCs, target rates and period of reduction, and the percentage reduction in target rates from the previous year which are used to calculate PSCs is intended to respond to such changes to the stocks and the fishery as:

- changes in the stock condition and abundance of prohibited species;
- changes in stock condition and abundance of target groundfish species, except that in the annual reviews this will not be applied to salmon. However, it will be included in the three-year review which is referenced in part "D", and the note to Table 26.2;
- changes in the degree of socioeconomic impact of prohibited species' catches on domestic fisheries dependent on them; and
- changes in the impact on the ability of foreign fisheries to take their groundfish TALFF.

In the annual adjustments of PSCs, the Regional Director, in consultation with the Council, shall consider all of the following, in order of priority:

1. the need to protect prohibited species for biological and other conservation reasons;
2. the impact of PSCs on the domestic fisheries dependent on prohibited species;
3. the impact of the PSC regulations on development and operation of domestic groundfish fisheries; and
4. the impact of PSCs on the foreign groundfish fisheries.

Prior to the beginning of each fishing year, the latest technical information bearing on changes to the stocks and the fishery will be provided to the Regional Director and the Council so that decisions for adjusting PSCs can be made by the beginning of the fishing year. When the final PSCs are determined, the Regional Director will notify nations of such adjustments.

F. Distribution of PSCs to foreign nations

1. Pacific halibut, king crab and Tanner crab

The PSCs for Pacific halibut, king crab and Tanner crab (species j) in any year (year i) shall be distributed to each nation in direct proportion to a nation's groundfish allocation by the following equation:

$$\text{Nation's PSC}_{ij} \text{ equals } \text{R}_{ij} \text{ multiplied by} \\ \text{Nation's Groundfish Allocation}$$

Since the total PSCij for Pacific halibut, king crab and Tanner crab is based on an incidental catch rate and will increase throughout the fishing year as TALFF is increased, a nation's PSCij may also increase accordingly.

2. Salmon

A nation's share of the salmon PSC at the beginning of a fishing year is in the same proportion to the total salmon PSC as its initial groundfish allocation is to the total groundfish TALFF plus reserves, and is automatically established by the following equation:

Nation's Initial Salmon PSC equals Total Salmon PSC multiplied by the Nation's Initial Groundfish Allocation divided by Total Initial Groundfish TALFF plus Reserves.

At the beginning of the fishing year, a portion of the salmon PSC will not be distributed to nations because groundfish reserves will not yet be apportioned and some of the initial TALFF may not yet be allocated. This remaining portion of the salmon PSC shall be subsequently distributed to nations in proportion to increases in their groundfish allocations which result from the apportionment of the initial unallocated TALFF and groundfish reserves.

G. Exceptions to Prohibited Species Management Regime for Pacific halibut, king crab, and Tanner crab

Although a nation's PSC may have been reached, the Regional Director may notify the nation that selected fishing elements of the nation's trawl fleet will be allowed to continue fishing under specified conditions until the nation's groundfish allocation is reached. The Regional Director will take into account the following considerations when making such allowances: (1) the risk of biological harm to prohibited species stocks and of socioeconomic harm to authorized prohibited species users posed by continued trawling by the selected elements; (2) the extent to which the selected elements have avoided incidental prohibited species catches up to that point in the fishing year; (3) the confidence of the Regional Director in the accuracy of the estimates of prohibited species catches by the selected elements up to that point in the fishing year; (4) whether observer coverage of the selected elements is sufficient to assure adherence to the prescribed conditions, and to alert the Regional Director to increases in the elements' prohibited species catch; and (5) the enforcement record of owners and operators of vessels included in the selected elements, and the confidence of the Regional Director that adherence to prescribed conditions can be assured in light of available enforcement resources. Any additional incidental catches of prohibited species by vessels which have been allowed to continue fishing will be considered when establishing future PSC limits.

H. Incentives for PSC Reduction

In making supplemental foreign groundfish allocations during a fishing year, the Council recommends that the Secretary of State, in consultation with the Secretary of Commerce, consider the effort of each nation to fulfill the objective of this section. It is inconsistent with the management objective of this section for any nation to conduct its fishing operations without: (1) an earnest attempt to reduce its catch of prohibited species; and (2) remaining within its PSC limitations. Supplemental allocations should serve to reward a nation for its past performance and should serve as an incentive to continue its operating methods that avoid prohibited species. A nation's effort to comply with PSC regulations is therefore a legitimate and important consideration in making foreign allocations.

In order to arrive at long-term solutions for controlling incidental catch of prohibited species, the foreign groundfish fisheries are encouraged to:

1. conduct NMFS approved gear experiments which are intended to reduce the incidental catch of prohibited species;
2. collect detailed information on the characteristics of incidental catches; and
3. transfer the information and gear technology conducive to reduction of the incidental catch of prohibited species to the U.S. for use by government and industry.

As an incentive for gear research, catches of prohibited species during any research aimed at long-term solutions for controlling incidental catches of prohibited species that are approved by the National Marine Fisheries Service will be exempted from the PSC limits for that nation, for that year. Groundfish catches during the research where the catch is retained for commercial purposes will continue to be counted towards a nation's allocations.

I. Estimation of Prohibited Species Catch

Catches of prohibited species will be estimated from data by U.S. observers and other reported statistics that are considered reliable.

7. Add the following Section 18.0 References:

North Pacific Fishery Management Council. 1981. Reducing the Incidental Catch of Prohibited Species by Foreign Groundfish Fisheries in the Bering Sea. Council Document #13. 195 p.



DEPARTMENT OF COMMERCE

Billing Code 3510-22-M

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

50 CFR Part 611

Foreign Fishing, Groundfish of the Bering Sea and Aleutian Islands Area

AGENCY: National Oceanic and Atmospheric Administration (NOAA), DOC

ACTION: Proposed rule; notice of approval and availability of plan amendment.

SUMMARY: The Assistant Administrator for Fisheries, NOAA, has initially approved Amendment 3 to the Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area. The amendment establishes a management system to reduce the incidental catch of salmon, Pacific halibut, king crab, and Tanner crab which are prohibited species in the Bering Sea and Aleutian Islands area foreign groundfish fishery. This management system is proposed in response to a growing concern that the general prohibition against taking and retaining prohibited species has not reduced their incidental catch in the foreign trawl fishery, which adversely affects the domestic target fisheries which utilize salmon, Pacific halibut, king crab and Tanner crab.

The intended effect of this action is to reduce the incidental catch and unnecessary mortality of salmon, Pacific halibut, king crab, and Tanner crab in foreign groundfish operations while still allowing the foreign fisheries an opportunity to harvest their groundfish allocations.

This amendment and its implementing rule supersede amendments 1a and 5 (47 FR 1295 and 48 FR ____) which established prohibited species catch limits for chinook salmon in the foreign trawl fishery.

DATE: Comments are invited until [insert date 45 days after publication in FEDERAL REGISTER].

ADDRESSES: Comments should be addressed to Robert W. McVey, Director, Alaska Region, National Marine Fisheries Service, P.O. Box 1668, Juneau, Alaska 99802. Individual copies of the amendment may be obtained by contacting the North Pacific Fishery Management Council, P.O. Box 3136 DT, Anchorage, Alaska 99510, 907-274-4563.

FOR FURTHER INFORMATION CONTACT: Robert W. McVey, 907-586-7221.

SUPPLEMENTAL INFORMATION:

The Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Islands Area (FMP) was implemented January 1, 1982, (46 FR 63295, December 31, 1981) by the NOAA Assistant Administrator for Fisheries (Assistant Administrator) pursuant to the Magnuson Fishery Conservation and Management Act (Magnuson Act). Eight amendments to the FMP have been adopted by the North Pacific Fishery Management Council (Council). The notice of final approval and implementation of Amendments 1a and 2 was published January 12, 1982 (47 FR 1295). Amendments 1, 4 and 5 have been submitted for review by the Assistant Administrator.

Amendment 1 establishes a framework management system for the Bering Sea and Aleutian Islands area groundfish complex and changes the time of the foreign trawl closure in the area known as Petrel Bank. Amendment 4 adjusts various species quotas and apportionments to the foreign and domestic fisheries. Amendment 5 reduces the number of chinook salmon that may be taken incidentally in the eastern Bering Sea foreign trawl fishery. Amendments 6 and 7 are being prepared for submission to the Assistant Administrator. Amendment 6 establishes a fishery development zone in which fish may be harvested only by United States vessels. Amendment 7 reduces a restriction on foreign longline vessels.

Amendment 3 to the FMP is the subject of this action and was adopted by the Council on September 26, 1981. This amendment establishes prohibited species catch (PSC) limits for salmon, Pacific halibut, king crab, and Tanner crab which are prohibited species in the foreign groundfish fisheries and are caught incidentally in those operations. Amendment 3 supersedes Amendments 1a and 5.

When U.S. observer data and/or other reported statistics that are considered reliable indicate that trawl vessels of a particular nation have caught incidentally a specified portion of the PSC for one of the above species, those vessels will be subject to a significant time/area closure in order to reduce or eliminate further taking of these species in the Bering Sea and Aleutian Islands area. This action is taken in response to the growing concern that the current requirement to return to the sea immediately those salmon, Pacific halibut, king crab, and Tanner crab caught incidentally in foreign groundfish operations has not reduced the incidental catch and associated mortality of these species. This situation has complicated the management of salmon, Pacific halibut, king crab, and Tanner crab, and the impacts have adversely affected the domestic target fisheries which utilize these species.

Salmon, Pacific halibut, and Tanner crab are also prohibited species in the domestic groundfish fishery, and king crab will become so upon implementation of a Bering Sea/Aleutian Islands king crab fishery management plan. While the Council advocates and strongly supports the development of the domestic groundfish fishery, it maintains that domestic groundfish fishermen must share in the responsibility of avoiding incidental catches of these species to the fullest extent possible. It is the present policy of the Council that through voluntary measures developed cooperatively with domestic groundfish fishermen, stocks of salmon, Pacific halibut, king crab, and Tanner crab can be sufficiently sequestered from needless and wasteful incidental catch to make unnecessary the imposition of special protective regulations upon the domestic groundfish fishery.

Management decisions made by the Secretary of Commerce to carry out the intent and purpose of Amendment 3 and its implementing rules shall be made in consultation with the Council whenever possible.

Determination of Annually Reduced Prohibited Species Catches

Part 1: Pacific halibut, king crab and Tanner crab

Incidental catches of Pacific halibut, king crab and Tanner crab will be reduced by reducing their incidental catch rates in the directed groundfish fisheries. Annual prohibited species catch rates (R) have been established for these three prohibited species, as shown in Table 1. The Rs have been calculated as percentage reductions of the average 1977-80 incidental catch rates (weight or number of each prohibited species per metric ton of groundfish caught). R is different for halibut, king crab and Tanner crab.

The average 1977-1980 incidental catch rate for Pacific halibut is to be reduced 50 percent by 1986. This catch rate reduction was chosen over a more stringent one due to the difficulty of avoiding halibut in the yellowfin sole fishery.

The average 1977-1980 incidental catch rates for king and Tanner crab will be reduced 25 percent by 1986. Currently, golden king crab, Lithodes aequispina, and the Tanner crab, Chionoecetes opilio, comprise 72-91 percent and 59-76 percent of the king and Tanner crab incidental catch respectively. L. aequispina and C. opilio are less valuable to the domestic crab fisheries relative to other king and Tanner crab species utilized by domestic fishermen. The 25 percent reduction schedule for the king and Tanner crab incidental catch (Table 1) was chosen upon consideration of (1) the relatively slight biological impact of the incidental crab catches on crab stocks utilized by domestic crab fisheries, and (2) the lesser socio-economic impact of the incidental catches on the domestic crab fishing industry.

An initial amount of PSC for halibut, king crab, and Tanner crab (species j) will be calculated each year (year i) by the following equation:

PSC_{ij} equals R_{ij} multiplied by Total Groundfish TALFF

The PSC_{ij} for halibut, king crab, and Tanner crab will increase in accordance with increases in the total groundfish TALFF which result from the apportionment of groundfish reserves or surplus DAH to TALFF.

The total annual PSC for halibut, king crab or Tanner crab will equal R_{ij} multiplied by the final groundfish TALFF. The annual PSCs for these species in any year shall be distributed to each nation in direct proportion to a nation's groundfish allocation by the following equation:

Nation's PSC_{ij} equals R_{ij} multiplied by Nation's Groundfish Allocation

Since the total PSC_{ij} for halibut, king crab, and Tanner crab is based upon an incidental catch rate and will increase throughout the fishing year as TALFF is increased, a nation's PSC_{ij} for these species may also increase accordingly.

If the Regional Director projects that a nation will not catch its groundfish allocation due to its interception of prohibited species he will caution the nation to avoid further prohibited species by-catches. Once a nation's specified portion of the PSC for Pacific halibut, king crab, or Tanner crab has been caught, the entire Bering Sea and Aleutian Islands area shall be

Table 1.--Incidental catch rate reductions for Pacific halibut, king crab and Tanner crab, based on the average 1977-80 foreign trawl groundfish and prohibited species catches.

Year	Halibut ^{1/}	King Crab ^{2/}	Tanner Crab ^{2/}
<u>Base Catch Rates</u>			
1977-80	3,182	916,804	16,003,329
Average	1,301,250	1,301,250	1,301,250
	base R=0.00245	base R=0.70456	base R=12.29843
<u>Rate Reduction Schedule, R</u>			
(1981)	--	--	--
(1982)	R=.00220 90%	R=.66933 95%	R=11.6840 95%
(1983)	R=.00196 80%	R=.63410 90%	R=11.0686 90%
(1984)	R=.00171 70%	R=.59887 85%	R=10.4537 85%
(1985)	R=.00147 60%	R=.56365 80%	R= 9.8387 80%
(1986)	R=.00122 50%	R=.52842 75%	R= 9.2238 75%

^{1/} Metric tons per metric ton of groundfish.

^{2/} Number of individuals per metric ton of groundfish.

closed to all trawling by vessels of that nation unless the Regional Director notifies the nation that specific areas and/or selected elements of the trawl fleet are exempted from such a closure, as specified under "Exemptions to PSC Regulations," below.

Part 2: Salmon

The absolute number of salmon established as PSC amounts will be reduced annually. The annual reductions for chinook salmon and for all species of salmon combined are shown in Table 2. These values are based on the Council's approved PSC reduction schedule for chinook salmon, negotiated between the principal domestic and foreign user groups (western Alaska residents and Japanese trawl industry representatives).

Salmon PSCs are indicated for 1981, 1982, and 1983 in Table 2. A complete review of the salmon PSC reduction program will be conducted by the Council in 1983 to determine the PSCs to be established during 1984 and 1985. The objective is to achieve a 75 percent reduction of the 1981 salmon PSC level by 1986. The 1983 review will consider the status of the chinook salmon resource, the economic and technological possibility of further PSC reductions, the economic and technological reasonableness of the 75 percent reduction goal by 1986, and other relevant matters.

The total salmon PSC for any year is based upon a negotiated absolute number which will not vary with TALFF. The salmon PSC will be allocated among foreign nations so that a nation's share of the salmon PSC at the beginning of a fishing year will be in the same proportion to the total salmon PSC as its initial groundfish allocation is to the total initial groundfish TALFF plus reserves, and is automatically established by the following equation:

Nation's Initial Salmon PSC equals Total Salmon PSC multiplied by the
Nation's Initial Groundfish Allocation divided by Total Initial
Groundfish TALFF plus Reserves.

At the beginning of the fishing year, a portion of the salmon PSC will not be distributed to nations because groundfish reserves will not be apportioned and some of the initial TALFF may not be allocated. This remaining portion of the salmon PSC will be subsequently distributed to nations in proportion to increases in their groundfish allocations which result from the apportionment of the initial unallocated TALFF or groundfish reserves.

The PSC reduction schedule established for salmon will be subject to a rolling PSC limit which fixes the incidental catch levels over a period of three successive years. A nation's incidental salmon catch may exceed its specified portion of the salmon PSC established for a fishing year by up to 10 percent, provided that the total incidental catch by that nation in any consecutive 3-year period does not exceed the sum of its specified portion of the salmon PSC established for those 3 years. All calculations of the rolling PSC limit shall start with the 1982 fishing season.

Once a nation's rolling PSC limit is reached for salmon, Fishing Area II and that portion of Fishing Area I lying between 55°N. and 57°N. latitude and 165°W. and 170°W. longitude shall be closed to trawling by vessels of that nation for so much of the months of January, February, March, October,

Table 2.--Target reduction schedule of salmon prohibited species catches based on the average 1977-80 foreign trawl salmon incidental catch.

Year	Chinook	Salmon Total Salmon ^{1/}
<u>Base Numbers</u>		
1977-80	74,400	80,000
<u>Reduced Catch Levels</u>		
(1981)	65,000	69,893
(1982)	55,250	59,409
(1983)	45,500	48,925
(1984)	to be determined	
(1985)	to be determined	
(1986)	16,250	17,473

^{1/} Total salmon numbers are calculated on the assumption that 93% of incidentally-caught salmon are chinook.

Note: A full and complete review of the salmon incidental catch reduction program will be conducted in 1983 to determine what the salmon incidental catch limits should be thereafter. This review will consider the status of the salmon resource, the economic and technological possibility of further incidental catch reductions, and other relevant matters. The review would also consider the economic and technological reasonableness of the goal set out above.

November, and December as remains in that fishing year. If any more salmon are caught by vessels of that nation in the areas which remain open, those incidental catches will be deducted from its next years' salmon PSC consistent with the rolling PSC limit.

Annual Review and Adjustment of PSCs

Since fisheries resources and socioeconomic conditions of the fishing industry are expected to change, the PSC management system for salmon, Pacific halibut, king crab, and Tanner crab will be reviewed annually by the Council. Annual PSCs, incidental catch rates, periods of PSC reductions, and the percentage reduction in PSCs or incidental catch rates over the previous year may be adjusted by the Secretary of Commerce. The annual review by the Council will be conducted to respond to concerns arising from:

1. the stock condition and abundance of prohibited species;
2. the stock condition and abundance of target groundfish species, except that in the annual reviews this will not be applied to salmon; however, it will be included in the 1983 review of the salmon PSC which is referenced above and in Table 2;
3. the socioeconomic impact of prohibited species' catches on domestic fisheries dependent on them; and
4. the impact of PSCs on the ability of foreign fisheries to take their groundfish TALFF.

When annual adjustments of the PSCs or incidental catch rates are determined to be necessary during the annual review process, the Secretary of Commerce will consider all of the following, in descending order of priority, when making such adjustments:

1. the need to protect prohibited species for biological and other conservation reasons;
2. the impact of PSCs on the domestic fisheries dependent on these species;
3. the impact of the PSC regulations on development and operation of domestic groundfish fisheries; and
4. the impact of PSCs on the foreign groundfish fisheries.

Prior to the beginning of each fishing year, the latest scientific and technical information bearing on changes to the fishery resources and their associated fisheries will be provided to the Secretary of Commerce and the Council so that timely decisions are made on annual PSC adjustments and notifications to foreign nations of such adjustments are given by the beginning of the fishing year.

Exemptions to PSC Regulations

Although a nation's PSC for Pacific halibut, king crab or Tanner crab may have been reached, the Regional Director may notify the nation that selected fishing elements of the nation's fleet will be allowed to continue fishing under specified conditions until the nation's groundfish allocation is reached. The Regional Director will take into account the following considerations when making such allowances: (1) the risk of biological harm to prohibited species stocks and of socioeconomic harm to authorized prohibited species users posed

by continued trawling by the selected elements; (2) the extent to which the selected elements have avoided incidental prohibited species catches up to that point in the fishing year; (3) the confidence of the Regional Director in the accuracy of the estimates of prohibited species catches by the selected elements up to that point in the fishing year; (4) whether observer coverage of the selected elements is sufficient to assure adherence to the prescribed conditions, and to alert the Regional Director to increases in the elements' prohibited species catch; and (5) the enforcement record of owners and operators of vessels included in the selected elements, and the confidence of the Regional Director that adherence to prescribed conditions can be assured in light of available enforcement resources. Any additional incidental catches of prohibited species by vessels which have been allowed to continue fishing will be considered when establishing future PSC limits.

The foreign longline fishery is currently exempted from the PSC regulations established for salmon, halibut, king crab, and Tanner crab, but it will be closely monitored for its impact on these species. The decisions to include or exclude this or other selected gear types from PSC regulations shall be made by the Secretary of Commerce after his evaluation of their impact on prohibited species.

Incentives to Reduce Prohibited Species Catches

Under Amendment 3, every foreign nation fishing for groundfish in the Bering Sea and Aleutian Islands area must make an earnest attempt to reduce its catch of prohibited species and remain within its PSC limitation for salmon, Pacific halibut, king crab, and Tanner crab. A nation's effort to reduce its prohibited species catch rate or number will be an important consideration when the Secretary of State allocates supplemental TALFF to foreign nations. The annual and in-season supplemental allocations to a nation will be intended as a reward to that nation for its compliance with PSC regulations and should serve as an incentive to that nation to continue developing fishing methods which avoid incidental catches of prohibited species.

In order to arrive at long-term solutions for controlling the incidental catch of prohibited species, foreign nations fishing for groundfish in the Bering Sea and Aleutian Islands area are encouraged to:

1. conduct NMFS-approved gear experiments which are intended to reduce the incidental catch of prohibited species;
2. collect detailed information on the characteristics of incidental catches; and
3. transfer information and technology gained during gear experiments to the U.S. for use by government and industry.

As an incentive to a nation to conduct these sanctioned gear experiments, any prohibited species which are caught during the experiments will be exempted from the PSC limits for that nation, for that year. Groundfish catches which are retained for commercial purposes during the experiments will continue to be counted towards the nation's groundfish allocations.

Classification

The Assistant Administrator has determined that this amendment to the FMP is necessary and appropriate for the conservation and management of fishery resources in the Bering Sea and Aleutian Islands area, and that the action is consistent with the national standards of the Magnuson Fishery Conservation and Management Act (Magnuson Act), other provisions of the Magnuson Act, and with other applicable law. He has, therefore, under sections 304 and 305 of the Magnuson Act, approved the FMP amendment and the proposed rules to implement it.

The Assistant Administrator has also determined that approval and implementation of Amendment 3 constitutes a major federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act. The Environmental Impact Statement written for the FMP and filed with the Environmental Protection Agency also addresses Amendment 3 and is available from the Council at the address set forth above.

The Assistant Administrator has further determined that approval and implementation of this amendment will be carried out in a manner that is consistent, to the maximum extent practicable, with the Alaska Coastal Management Program, as required by section 307(c) of the Coastal Zone Management Act of 1972 and its implementing regulations, 15 CFR Part 930, Subpart C.

On the basis of criteria set forth in Executive Order 12291 (E.O. 12291), the Administrator, NOAA, has determined that this amendment does not constitute a "major rule" requiring the preparation of a regulatory impact analysis. This rulemaking will not result in an annual effect on the economy of \$100 million or more; it will not result in a major increase in costs or prices for consumers, individuals, industries, Federal, State or local government agencies or geographic regions; and it will not result in significant adverse effects on competition, employment investment, productivity, innovation, or on the ability of domestic-based enterprises to compete with foreign-based enterprises in domestic export of markets. The Administrator has further determined (1) that the implementation of Amendment 3 will adversely affect foreign interests exclusively, and (2) that it will have a significant beneficial economic impact on a substantial number of small domestic entities; thus requiring the preparation of a regulatory flexibility analysis (5 U.S.C. 600 *et seq.*). The initial regulatory flexibility analysis (IRFA) prepared on Amendment 3 concludes that the amendment may potentially impose substantial costs on those foreign nations which fail to achieve the target reductions in PSC by forbidding those nations from harvesting a portion of their TALFF due to time and area closures or gear restrictions triggered by attainment of allocated PSC quotas. The assumption underlying the schedule of reductions set forth in the amendment is that achievement of these target levels is feasible without unduly inhibiting the attainment of TALFF. As annual performance in meeting the scheduled targets is observed, quantitative estimates of the cost of groundfish catch foregone, if any, in the foreign fishery will be possible.

The net benefits derived by U.S. domestic directed fisheries as a result of the reduced incidence of loss to groundfish trawls of juvenile Pacific halibut, crab, and salmon are considerable. The specific methodology employed in

estimating these net benefits is summarized in the IRFA. The discounted real present value of the savings to U.S. target fisheries from the implementation of Amendment 3 range from \$1.17 million from the 1982 PSC reduction to nearly \$4 million from the 1986 PSC reduction. Assuming maintenance of the 1983 salmon interception figures as a base for 1984 through 1986 (PSC reductions for salmon during these years are unknown at this time), the total discounted real present value of the five-year PSC reduction program for halibut, king crab, Tanner crab, and salmon is more than \$14.8 million at the ex-vessel level. Considerably greater total benefits will accrue to regional as well as U.S. economies as the impact of these savings move through the support, processing, wholesale/distribution, and retail sectors.

Other benefits accruing from the implementation of Amendment 3 are associated with the enhanced development opportunities of the domestic groundfish fishery. Under the amendment, no restrictive regulation is imposed upon domestic groundfish trawlers to reduce PSC levels, but rather, voluntary measures on the part of the U.S. trawlers are expected to adequately protect prohibited species stocks. This regulatory flexibility is seen to be vitally important to the sustained growth and economic success of the domestic groundfish industry and many sectors of the industry have indicated that the U.S. groundfish fishery would not exist without this de facto exemption from mandatory PSC reduction levels.

The last category of benefits associated with Amendment 3 involve the prospects for improved management of the Pacific halibut, king crab, Tanner crab, and salmon resources. By significantly reducing the interception and attendant mortality of juvenile prohibited species in the groundfish trawl fisheries, the amendment enhances the health and stability of these resources and contributes to the efficient management of U.S. fisheries dependent upon them.

Amendment 3 carries with it no additional management nor enforcement costs beyond those already incurred in implementation of the Bering Sea/Aleutian Islands area FMP and all the data on PSCs necessary for administering the provisions of the amendment are presently collected by the existing U.S. observer program or through other currently available sources.

Finally, the proposed rule does not contain a collection of information requirement or involve any collection of information within the meaning of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.).

List of Subjects in 50 CFR Part 611

Fish,
Fisheries,
Foreign relations,
Reporting requirements

Dated:

Robert K. Crowell
Deputy Executive Director
National Marine Fisheries Service
BSAI6/A-8

For the reasons set out in the preamble, 50 CFR Part 611 is proposed to be amended as follows (only the amendatory language is reproduced below):

PART 611 - FOREIGN FISHING

1. The authority citation for Part 611 reads as follows:

AUTHORITY: 16 U.S.C. 1801 et seq., unless otherwise noted.

2. In Section 611.93, paragraph (c)(2)(ii)(E) is revised and paragraph (e) is added, as follows:

Section 611.93 Bering Sea and Aleutian Islands Groundfish Fishery

* * * * *

(c) * * *

(2) * * *

(ii) * * *

(E) Prohibited Species Catch (PSC) Limits

(1) Salmon. (i) During any fishing year, that portion of fishing area I lying between 55°N. and 57°N. latitude and 165°W. and 170°W. longitude and all of fishing area II may be closed for the remainder of the periods January 1 through March 31 and October 1 through December 31 to trawl vessels of any nation. This closure shall occur when vessels of a nation have intercepted an amount of salmon which exceeds by 10 percent that nation's portion of the salmon prohibited species catch (PSC) established for the current fishing year (Table 2), or when vessels of that nation have intercepted an amount of salmon in any consecutive three-year period which exceeds the sum of that nation's portion of the salmon PSC established for those 3 years. Any salmon caught incidentally by vessels of that nation in the area which remains open shall be applied against its portion of the following years' salmon PSC. Fishing areas I and II are shown in Section 611.9, Appendix II, Figure 2.

[Insert Table 2]

Table 2.--Target reduction schedule of salmon prohibited species catches based on the average 1977-80 foreign trawl salmon incidental catch.

Year	Chinook	Salmon Total Salmon ^{1/}
<u>Base Numbers</u>		
1977-80	74,400	80,000
<u>Reduced Catch Levels</u>		
(1981)	65,000	69,893
(1982)	55,250	59,409
(1983)	45,500	48,925
(1984)	to be determined	
(1985)	to be determined	
(1986)	16,250	17,473

^{1/} Total salmon numbers are calculated on the assumption that 93% of incidentally-caught salmon are chinook.

Note: A full and complete review of the salmon incidental catch reduction program will be conducted in 1983 to determine what the salmon incidental catch limits should be thereafter. This review will consider the status of the salmon resource, the economic and technological possibility of further incidental catch reductions, and other relevant matters. The review would also consider the economic and technological reasonableness of the goal set out above.

(ii) A nation's initial portion of the salmon PSC for a fishing year shall be determined by multiplying the total salmon PSC for that year by the ratio of that nation's initial groundfish allocation to the total initial TALFF plus reserves for groundfish:

Nation's initial salmon PSC equals total salmon PSC multiplied by nation's initial groundfish allocation divided by total initial groundfish TALFF and reserve.

At the beginning of the fishing year, a portion of the salmon PSC will not be distributed to nations because groundfish reserves will not yet be apportioned and some of the initial TALFF may not yet be allocated. This remaining portion of the salmon PSC shall be subsequently distributed to nations in proportion to increases in their groundfish allocations which result from the apportionment of the initial unallocated TALFF and groundfish reserves.

(2) Pacific halibut, king crab and Tanner crab. (i) When vessels of a nation have intercepted incidentally that nation's portion of the PSC of Pacific halibut, king crab, or Tanner crab established for the current fishing year, the entire management area shall be closed for the remainder of that fishing year to trawling by vessels of that nation. During any year (year i), the PSCs for each of these species (species j) are based upon the incidental catch rates (R), shown in Table 3:

PSC_{ij} equals R_{ij} multiplied by the total groundfish TALFF.

Using this formula, the PSC for Pacific halibut, king crab, and Tanner crab will increase in proportion to increases in the total TALFF which result from the apportionment of groundfish reserves or surplus DAH to TALFF under paragraph (b)(2) of this section.

(ii) A nation's portion of the PSCs for Pacific halibut, king crab, and Tanner crab, at any time during the fishing year, is determined by multiplying that nation's groundfish allocation by R.

Nation's PSC_{ij} equals R_{ij} multiplied by nation's groundfish allocation

[Insert Table 3]

Table 3.--Incidental catch rate reductions for Pacific halibut, king crab and Tanner crab, based on the average 1977-80 foreign trawl groundfish and prohibited species catches.

Year	Halibut ^{1/}	King Crab ^{2/}	Tanner Crab ^{2/}
<u>Base Catch Rates</u>			
1977-80	3,182	916,804	16,003,329
Average	1,301,250	1,301,250	1,301,250
	base R=0.00245	base R=0.70456	base R=12.29843
<u>Rate Reduction Schedule, R</u>			
(1981)	--	--	--
(1982)	R=.00220 90%	R=.66933 95%	R=11.6840 95%
(1983)	R=.00196 80%	R=.63410 90%	R=11.0686 90%
(1984)	R=.00171 70%	R=.59887 85%	R=10.4537 85%
(1985)	R=.00147 60%	R=.56365 80%	R= 9.8387 80%
(1986)	R=.00122 50%	R=.52842 75%	R= 9.2238 75%

^{1/} Metric tons per metric ton of groundfish.

^{2/} Number of individuals per metric ton of groundfish.

* * * * *

(e) Inseason Management Decisions.

(1) Field Orders

(i) Any field order issued by the Secretary under this section shall include the following:

- (A) The Secretary's findings required by paragraph (e)(2) of this section;
- (B) a description and order of the modification of time and area limitations, based upon the Secretary's findings; and
- (C) the effective dates of the modification

(ii) No field order issued under this section may take effect until:

- (A) it has been filed for publication with the FEDERAL REGISTER;
- (B) the foreign nations concerned and the designated representatives for affected foreign fishing vessels are notified. If practicable, notification shall be given at least 48 hours before the field order is to be effective; and
- (C) the public has been offered the opportunity to comment upon the Secretary's proposed findings and order of modification for a period of at least thirty (30) days, unless the Secretary finds that such prior opportunity for public comment would adversely affect the conservation and management of groundfish or unallocated species.

(iii) If the Secretary finds that prior opportunity for public comment on the proposed findings and order of modification would adversely affect the conservation and management of groundfish or unallocated species, he shall receive public comments on the field order for thirty (30) days after its effective date, making available to the public during business hours the aggregate data on which it was based. After considering the comments received, the Secretary shall determine whether the field order should be changed.

(iv) Any modification prescribed by a field order issued under this section shall remain in effect in accordance with the terms of the field order, or of any subsequent field order which may be issued under this section.

(2) Prohibited Species Catch (PSC) Limits.

(i) The PSCs or incidental catch rates for salmon, Pacific halibut, king crab, and Tanner crab established in paragraph (c)(2)(ii)(E) of this section shall be reviewed annually by the Secretary, in consultation with the North Pacific Fishery Management Council in order to respond to changes in relevant circumstances, including the following:

- (A) changes in the stock condition and abundance of prohibited species;

(B) changes in the stock condition and abundance of target groundfish species, except that such changes shall not be considered relevant to the salmon PSC except in the course of a full and complete review of the salmon PSC reduction program to be conducted during 1983;

(C) changes in the degree of socioeconomic impact of prohibited species catches on the domestic fisheries dependent on those species; and

(D) changes in the impact of PSCs on the opportunity of foreign fisheries to take their groundfish allocations.

(ii) Based upon the most recent scientific and technical information available, and prior to the beginning of the fishing year, the Secretary shall issue a field order under paragraph (e)(1) of this section to adjust the PSC's or incidental catch rates for salmon, Pacific halibut, king crab, and Tanner crab after consultation with the North Pacific Fishery Management Council under paragraph (e)(2)(i) of this section and after he has considered all of the following in descending order of priority and issued relevant findings:

(A) the need to protect prohibited species for biological and other conservation reasons:

(B) the impact of PSC regulations on the domestic fisheries dependent on prohibited species;

(C) the impact of the PSC regulations on development and operation of domestic groundfish fisheries; and

(D) the impact of PSC regulations on the foreign groundfish fisheries.

(iii) The Regional Director will notify a nation when its portion of the PSC for salmon, Pacific halibut, king crab, or Tanner crab, as established under paragraph (c)(2)(ii)(E) of this section, is approached, so that voluntary efforts by vessels of that nation may reduce the incidental catch of these species. Once a nation's portion of the PSC for Pacific halibut, king crab, or Tanner crab, as established under paragraph (c)(2)(ii)(E) of this section, has been reached, the Regional Director may by field order allow selected fishing elements of the nation's fishing fleet to continue fishing under specified conditions until the nation's groundfish allocation is reached, although any additional incidental catch of prohibited species by vessels which have been allowed to continue fishing will be considered when establishing future PSC limits. The Regional Director shall take into account the following considerations when making such allowances and shall issue relevant findings:

(A) the risk of biological harm to prohibited species stocks and of socioeconomic harm to authorized prohibited species users posed by continued trawling by the selected elements;

(B) the extent to which the selected elements have avoided incidental prohibited species catches up to that point in the fishing year;

(C) the confidence of the Regional Director in the accuracy of the estimates of prohibited species catches by the selected elements up to that point in the fishing year;

(D) whether observer coverage of the selected elements is sufficient to assure adherence to the prescribed conditions, and to alert the Regional Director to increases in the elements' prohibited species catch; and

(E) the enforcement record of owners and operators of vessels included in the selected elements, and the confidence of the Regional Director that adherence to prescribed conditions can be assured in light of available enforcement resources.



REGULATORY IMPACT REVIEW/INITIAL REGULATORY FLEXIBILITY ANALYSIS

OF AMENDMENT 3 THE FISHERY MANAGEMENT PLAN

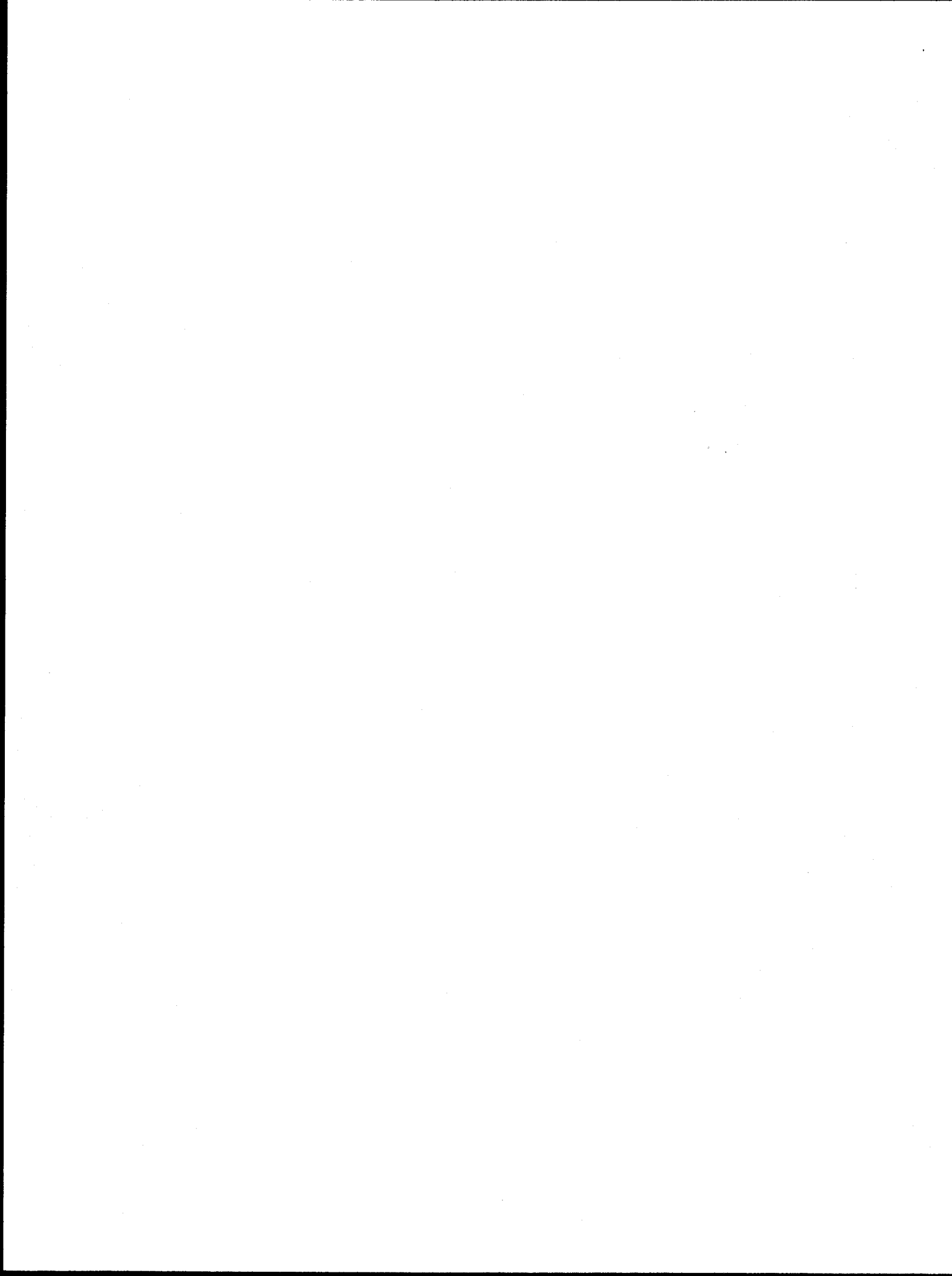
FOR THE BERING SEA AND ALEUTIAN ISLANDS GROUND FISH FISHERY

ADOPTED BY

THE NORTH PACIFIC FISHERY MANAGEMENT COUNCIL

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Region

November 1981



I. INTRODUCTION

The incumbent Administration's policy on the development and issuance of regulations is established by Executive Order 12291. The main objectives of that policy are to reduce the burdens imposed by existing and future regulations, to increase agency accountability for regulatory actions, and to provide for Presidential oversight of the regulatory process, minimize duplication and conflict of regulations, and insure well-reasoned regulations. Under these guidelines each agency, to the extent permitted by law, is expected to comply with the following requirements:

1. Administrative decisions shall be based on adequate information concerning the need for and consequences of proposed government action;
2. Regulatory action shall not be undertaken unless the potential benefits to society from the regulation outweigh the potential costs to society;
3. Regulatory objectives shall be chosen to maximize the net benefits to society;
4. Among alternative approaches to any given regulatory objective, the alternative involving the least net cost to society shall be chosen; and

5. Agencies shall set regulatory priorities with the aim of maximizing the aggregate net benefit to society, taking into account the condition of the particular industries affected by regulations, the condition of the national economy, and other regulatory actions contemplated for the future.

In compliance with the Executive Order 12291, the National Marine Fisheries Service (NMFS) requires the preparation of a Regulatory Impact Review (RIR) for all regulatory actions which either implement a new fishery management plan (FMP) or significantly amend an existing FMP, or may be significant in that they affect important DOC/NOAA policy concerns and are the objective of public interest. The RIR (1) provides a comprehensive review of the level and incidence of impact associated with the proposed or final regulatory actions; (2) provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problems; and (3) ensures that the regulatory agency or council systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way.

The RIR also serves as the basis for determining whether the proposed regulations implementing the FMP or amendment are major under criteria provided in Executive Order 12291 (described above), whether or not the proposed regulations will have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (P.L. 96-354), and whether or not the Paperwork Reduction Act of

1980 (P.L. 96-511) applies. The primary purpose of the Regulatory Flexibility Act is to relieve small businesses, small organizations, and small governmental jurisdictions (collectively, "small entities") from burdensome regulatory and recordkeeping requirements. This Act requires that if regulatory and recordkeeping requirements are not burdensome, then the head of an agency must certify that the requirement, if promulgated, will not have a significant economic effect on a substantial number of small entities.

The purpose of the Paperwork Reduction Act, in part, is to minimize the federal paperwork burden for individuals, small businesses, state and local governments, and other persons. This Act requires each agency to ensure its information systems do not overlap each other or duplicate the systems of other agencies.

This RIR analyzes the impacts of a rule that would establish a management system to reduce the incidental catch of salmon, Pacific halibut, king crab, and Tanner crab in the Bering Sea and Aleutian Islands area foreign groundfish fishery.

II. BACKGROUND

In 1977, under authority of the Magnuson Fishery Conservation and Management Act (Magnuson Act), the Secretary of Commerce assumed management jurisdiction over foreign fishing for Bering Sea and Aleutian Islands area groundfish in the 3-200 mile Fishery Conservation Zone (FCZ) by promulgating the Trawl Fisheries and Herring Gillnet Fisheries

of Eastern Bering Sea and Northeast Pacific Preliminary Management Plan (PMP). The PMP was published in the Federal Register (43 FR 9298) on February 15, 1977, and implemented March 1, 1977. It regulated foreign fishing through 1981. The North Pacific Fishery Management Council (Council) developed a Fishery Management Plan for the Groundfish Fishery of the Bering Sea and Aleutian Island Area (FMP) and submitted it in 1979 to the Assistant Administrator for approval and implementation under the Magnuson Act. The FMP and its implementing regulations became effective on January 1, 1982 (46 FR 63295) and govern fishing for groundfish by United States and foreign vessels in the FCZ of the Bering Sea and that part of the North Pacific Ocean adjacent to Alaska west of 170° west longitude.

The FMP has been amended two times since it was implemented. One of these, Amendment 1a, was implemented January 12, 1982, and limited the annual prohibited species catch (PSC) of chinook salmon that could be taken incidentally in the foreign groundfish trawl fishery to 55,250 fish. A subsequent amendment (Amendment 5) was submitted for Secretarial review on June 1, 1982, and proposes to reduce the number of chinook salmon that may be taken during a fishing year in the foreign trawl fishery to 45,500 fish.

The FMP explicitly recognizes the significant potential adverse impact, not only of chinook salmon losses, but of all prohibited species interceptions associated with the groundfish fishery conducted under the FMP and provides for amelioratory action.

Subsequent to the adoption of the FMP the Council determined that even broader action to reduce incidental catch losses were necessary. On September 25, 1981, the Council approved Amendment 3 to the FMP for Secretarial review. This amendment establishes a management regime for prohibited species, primarily salmon, Pacific halibut, king crab, and Tanner crab, taken incidentally in the extensive foreign groundfish operations in the plan area. It further establishes the policy of the Council towards the incidental catch of prohibited species in the developing domestic groundfish fishery. Amendment 3 will supercede Amendments 1a and 5 when approved.

II. PROBLEMS NECESSITATING AMENDMENT 3

Amendment 3 to the FMP is proposed in response to several persistent problems. First, interceptions of prohibited species, particularly salmon, Pacific halibut, king and Tanner crab, by groundfish trawlers, impose significant economic burdens upon U.S. fishermen targeting on these species. Concomitantly, the magnitude of these PSC losses complicate and frustrate the efficient management of the Pacific halibut, salmon, king and Tanner crab resource within their respective domestic fisheries and increase the potential biological vulnerability of these stocks.

In addition, while the current FMP does require that trawlers seek to minimize their by-catch of prohibited species, there is growing concern that the general prohibition against taking and retaining these species has not served to reduced their incidental capture in the groundfish trawl fishery.

III. SPECIFIC OBJECTIVES OF AMENDMENT 3 TO THE FMP

Amendment 3 includes two principal objectives based upon the general goals setforth in the Bering Sea and Aleutian Islands area FMP, section 4.2; they are:

- (1) to effect gradual reductions in the catch of prohibited species by the foreign groundfish fishery consistent with the need to provide opportunities to catch the TALFF of groundfish.

Rationale: Interceptions of prohibited species by foreign groundfish trawlers impose a significant adverse economic impact on domestic directed fisheries. While the FMP provides a general prohibition against the catching and retention of these economically and culturally important species, rates of interception remain high. Handling mortality, encountered during landing and returning prohibited species to the sea, is virtually one-hundred percent in this fishery. Therefore, the intent of the amendment is to incrementally reduce the prohibited species by-catch loss to reach established target levels within a relatively short time frame of five years. This is believed to be a feasible goal which can be accomplished without seriously impairing the ability of foreign nations to achieve TALFF.

- (2) to provide an environment which supports domestic harvesting of groundfish with an awareness of principles and techniques for minimizing incidental catches of Pacific halibut, salmon, and king and Tanner crab.

Rationale: Amendment 3 expands the Council's policy, as expressed in the FMP, for the developing domestic groundfish fishery and the catch of prohibited species. While United States' vessels must continue to minimize their incidental by-catch of Pacific halibut, salmon, Tanner crab, king crab, and any other species the fishery for which in the area governed by this FMP is governed by another management regime, the Council is encouraging development of the

domestic groundfish fishery by not proposing specific PSC management measures at this time.

The Council's expressed policy is that, at least in the present, voluntary measures developed by domestic fishermen should adequately protect stocks of salmon, Pacific halibut, king crab and Tanner crab from unnecessary and wasteful by-catch and make unnecessary the imposition of special protective management measures.

IV. DESCRIPTION AND ANALYSIS OF PROPOSED MANAGEMENT MEASURES

Three alternatives have been considered relative to the prohibited species catch problem in the Bering Sea and Aleutian Islands area groundfish fishery. They include: (1) adopt and implement Amendment 3 to the existing FMP, which requires a systematic decrement in foreign prohibited species interception rates and the monitoring of U.S. prohibited species interception rates; (2) close INPFC areas I and II of the Bering Sea to groundfish trawling during the period October 1 through March 31, when prohibited species are believed to be highly concentrated and therefore unusually vulnerable to interception; (3) do not adopt Amendment 3 but continue prohibited species management as prescribed in the current FMP (status quo).

Each alternative and its associated costs and benefits are reviewed below.

A. Alternative 1 - adopt and implement Amendment 3 to the FMP.

The amendment broadens regulatory control over prohibited species by-catches in the groundfish fishery, (1) by instituting a schedule for reductions in the rates of prohibited species interception in the foreign fishery; and (2) by encouraging the development of voluntary measures, by domestic fishermen, to reduce PSC losses.

1. Description of the amendment measures.

For Pacific halibut, Tanner crab, and king crab, the targeted reductions in PSC levels will be calculated annually, based upon a declining PSC rate. This reduction schedule differs for each species (Table 1). A base catch rate is calculated for the four year period 1977-80 as the average foreign PSC divided by the average trawl groundfish catch (all foreign nations). It is from this base that the species specific rate reductions are projected.

TABLE 1.--Target Reduction Schedule of Prohibited Species Catch Rates from 1977-80 Base Levels.

Year	Pacific Halibut	King Crab	Tanner Crab
	<u>Metric Tons per mt groundfish</u>	<u>Number of Individuals per mt groundfish</u>	
<u>Base Catch Rates (R)</u>			
1977-80	3,182	916,804	16,003,329
Average	<u>1,301,250</u> R=0.00245	<u>1,301,250</u> R=0.70456	<u>1,301,250</u> R=12.2984
<u>Schedule of Reduction</u>			
(1981)	--	--	--
(1982)	R=.00220 90%	R=.66933 95%	R=11.6840 95%
(1983)	R=.00196 80%	R=.63410 90%	R=11.0686 90%
(1984)	R=.00171 70%	R=.59887 85%	R=10.4537 85%
(1985)	R=.00147 60%	R=.56365 80%	R= 9.8387 80%
(1986)	R=.00122 50%	R=.52842 75%	R= 9.2238 75%

The reduction schedule catch rate, R, is applied to the relevant annual TALFF to derive the Prohibited Species Catch level for each species, for each nation.

$$PSC_{ijk} = (R_{ij} \times TALFF_{ik});$$

PSC_{ijk} = catch of species "j" in year "i" by nation "k".

The total PSC for species "j" in year "i" is simply the sum of the PSC_{ijk} 's for all nations.

The Regional Director will notify a nation when its portion of the PSC for salmon, Pacific halibut, king crab, or Tanner crab is approached so that voluntary efforts by vessels of that nation may reduce the incidental catch of these species. Once a nation's portion of the PSC for Pacific halibut, king crab, or Tanner crab is reached, the entire Plan region is closed to trawl vessels of the affected nation, unless the Regional Director allows selected elements of the fleet to continue fishing.

The prohibited species catch reduction schedule for salmon is determined separately. The schedule for chinook salmon was determined by the principal user groups (western Alaskan residents and Japanese trawl industry representatives) through negotiation. The Council has adopted and approved this schedule as it appears in Table 2.

Table 2.--Target Reduction Schedule of Salmon Prohibited Species Catch

Year	Chinook	Total Salmon ^{1/}
Base Catch (numbers of fish)	74,400	80,000
Schedule of Reduction (absolute catch)		
1981	65,000	--
1982	55,250	59,409
1983	45,500	48,925
1984	to be determined	
1985	to be determined	
1986	16,250 ^{2/}	17,473 ^{2/}

^{1/} Absolute numbers of salmon are calculated on the assumption that 93 percent of incidentally-caught salmon are chinook.

^{2/} A full and complete review of the salmon incidental catch reduction program will be conducted in 1983 to determine what the salmon incidental catch limits should be thereafter. This review will consider the status of the salmon resource, the economic and technological possibility of further incidental catch reductions, and other relevant matters. The review would also consider the economic and technological reasonableness of the goal set out above.

Salmon PSC's are indicated for 1981, 1982, and 1983. PSC's for 1984 and 1985 should be reduced further for the purpose of achieving the goal of a 75 percent reduction from the 1981 level within five years, i.e. 16,250 chinook salmon or 17,473 for all salmon combined for the 1986 fishing year.

The salmon PSC's will be reviewed annually and a full and complete review of the salmon PSC reduction program will be conducted by the

Council in 1983 to determine the PSC's to be established thereafter.

The review will consider the status of the chinook salmon resource, the economic and technological possibility of further PSC reductions, the reasonableness of the goal for 1986, and other relevant matters.

The PSC reduction schedule for salmon is subject to the following conditions:

1. A rolling PSC limit which fixes the by-catch levels over a period of three successive years will be in effect. In any year, a nation's incidental salmon catch may exceed the specified limit by up to 10 percent, provided that the total incidental catch by that nation in any consecutive three-year period does not exceed the sum of the PSC limits for those three years.

Note: All calculations of the rolling PSC limit shall start with the 1982 fishing season, regardless of when this section is implemented by the Secretary.

2. Once the rolling PSC limit is reached for salmon, Bering Sea Area II will be closed to trawlers of the affected nation, as well as part of Area I lying between 55°N and 57°N latitude and between 165°W and 170°W longitude for so much of the months of January, February, March, October, November, and December which remain in that fishing year.

3. If any more salmon are caught in the areas which remain open, those catches will be deducted from the next years' salmon PSC of the affected nation consistent with the rolling PSC limit.

The salmon PSC in any year will be allocated among fishing nations in a manner similar to the PSC's for Pacific halibut, king and Tanner crab cited above. PSC targets for salmon have been established on the basis of negotiated absolute catch limits, i.e., numbers of fish, for chinook salmon, assumed to account for 93 percent of the total salmon interception in this fishery rather than employing an interception rate (R).

The PSC for salmon, minus a small PSC reserve, shall be distributed to each foreign fishing nation in proportion to its initial groundfish allocation in that year. The salmon PSC reserve will be subsequently distributed among nations in proportion to increases in their TALFF's resulting from the apportionment of groundfish reserves. The foreign longline fishery is exempted from PSC regulations, although it is still required to minimize interception and handling loss under the FMP. It's impact on prohibited species will be closely monitored.

2. How the management measures achieve the Prohibited Species Catch Reduction objectives.
 - a. Specification of PSC's for Pacific halibut, king and Tanner crab, and salmon.

The adoption of a foreign fishing PSC allocation program, based upon historic rates of prohibited species by-catch and an attainable annual

reduction rate, is expected to provide, for the first time, a quantitative performance standard against which each foreign nation may be judged. Previously, there has been only a requirement to minimize the capture of and return to the sea these economically important species.

Institution of PSC limits for each foreign nation operating in the FCZ groundfish fishery will permit both managers and fishing nations to monitor progress towards achievement of the amendment objectives.

- b. Time/area closures and/or gear restrictions for foreign nationals.

The imposition of time/area closures or gear restrictions on a nation by nation basis will be used to insure compliance with PSC limits. While Pacific halibut, salmon, king and Tanner crab will continue to be prohibited to foreign fishermen to the same extent that they have been under the FMP, and their retention forbidden, records of their incidental harvest will be required. Assuming adequate data from observer coverage and other reliable sources, it will be possible to closely monitor the Pacific halibut, salmon and crab by-catch of each nation and restrict or preclude further fishing activity by any nation once its share of the total PSC has been attained. In this way, opportunities for the achievement of objective 1 will be enhanced while retaining, through explicit provision, necessary management flexibility allowing the Regional Director to exempt selected elements of a nation's fleet from the restriction.

c. Incentives for experimental gear research

In order to arrive at long-term solutions for controlling incidental catch of prohibited species, the nations participating in the foreign groundfish fisheries of the Bering Sea/Aleutian Islands area will be encouraged to conduct gear and methodological experiments, subject to the advance approval of NMFS, to reduce PSC. These experimental efforts must involve the collection of detailed information on the characteristics of incidental catches and the transfer of this information and gear technology to the U.S. for use by government and the domestic industry.

As an incentive for foreign sponsored gear research, catches of prohibited species during any research aimed at long-term solutions for controlling incidental catches of prohibited species that are approved by NMFS will be exempted from the PSC limits for that nation, for that year. Groundfish catches during the experimental fishing, where the catch is retained for commercial purposes, will be counted towards the nation's allocation.

d. Exemption of U.S. groundfish trawlers from PSC limitations.

As previously noted, Amendment 3 expands the Council policy for the developing domestic groundfish fishery and the catch of prohibited species. While U.S. vessels must still minimize their incidental harvest of Pacific halibut, salmon, Tanner crab, king crab, and any other species the fishery for which in the area governed by this FMP is governed by

another management regime, the Council is encouraging domestic groundfish fishery development by not proposing specific management measures at this time. Instead, consistent with the achievement of objective 2 of this amendment, the Council intends to provide an environment which supports domestic harvesting of groundfish with an awareness of principles and techniques for minimizing incidental by-catches of these economically important species.

3. Analysis of the impacts

a. Costs

Amendment 3 carries with it no additional management nor enforcement costs beyond those already incurred in implementation of the Bering Sea/Aleutian Islands area FMP. The amendment imposes no additional reporting requirements on either foreign or domestic operators. All the data on PSC's necessary for administering the provisions of the amendment are presently collected by the existing observer program or through other currently available sources.

The provisions of this amendment may potentially impose substantial costs on those foreign nations which fail to achieve the target reductions in PSC. These costs would be associated with that portion of a nation's groundfish TALFF left unharvested due to time and area closures or gear restrictions triggered by attainment of allocated PSC quotas. An estimate of the magnitude of these costs would be purely speculative at this time and could therefore serve no useful purpose. The assumption underlying

the schedule of reductions set forth in the amendment is that achievement of these target levels is feasible without unduly inhibiting the attainment of TALFF. Whether the assumption is valid bears careful watch during the amendment's five year time-table. As annual performance in meeting the scheduled targets is observed, quantitative estimates of the cost of groundfish catch foregone, if any, in the foreign fishery will be possible.

Implementation of the amendment is not expected to produce any measurable adverse impacts upon employment, distributional stability, nor product availability or price to consumers on world markets.

b. Benefits

Benefits accruing from the implementation of Amendment 3 fall into three general categories. The first, and most easily quantified, are the benefits derived by U.S. domestic directed fisheries, as a result of the reduced incidence of loss to groundfish trawls of juvenile Pacific halibut, crab, and salmon. Since incidental catches diminish the biomass available to directed fisheries, they tend to reduce directed catch and/or increase cost per unit of fish harvested. Through an aggressive PSC reduction program significant economic benefits will accrue to these fisheries. The magnitude of these benefits to U.S. fishermen can be estimated by calculating the exvessel value of the domestic catch that is foregone due to incidental interceptions in the groundfish fisheries with and without the PSC reduction schedule. The difference reflects the savings attributable to the amendment's provisions.

Such a figure represents an upper limit estimate because it is predicated on the assumption that the entire incidental catch, minus losses due to natural mortality, would have been harvested in directed fisheries without increase in effort or cost.

Because the PSC reduction schedule spans the 1982 through 1986 fishing seasons, it was necessary to make projections as to the total annual foreign groundfish catch for those years. This was done in two stages; first by calculating the average annual percent of TALFF which was actually harvested, 1977-80; and then by estimating the annual rate of change in total TALFF since domestic groundfish operations began to enter the fishery, 1980-82. Based upon these two components, annual groundfish catches were calculated and then employed along with the PSC schedule statistics to evaluate the economic impacts attributable to this aspect of the amendment. The specific methodology employed in estimating this net benefit attributable to the provisions of the amendment is summarized along with the projected results in Tables 3, 4, 5, 6, and 7, for 1982, 1983, 1984, 1985, and 1986, respectively.

As this series of tables indicate, the discounted real present value of the savings to U.S. target fisheries from implementation of Amendment 3 PSC reduction provisions are considerable. They range from a savings of \$1.17 million from the 1982 PSC reduction to nearly \$4 million from the 1986 PSC reduction. In reality the savings for 1984, 1985, and 1986 will be even greater than reported, ceteris paribus, since the PSC salmon limits have not been included in the estimates for these years. This is because Amendment 3 provides for a full and complete review of

TABLE 3. Estimated Impact of Prohibited Species Interceptions in the Foreign Trawl Fishery Bering Sea/Aleutian Islands Area, 1982

	Halibut		3/		Red		King Crab		Blue		Bairdi		Tanner Crab		Opilio		Chinook		Salmon		Other	
	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o
Incidental Catch Rate ^{1/}	.0022	.00245	.0535	.0564	.0040	.0042	4.849	5.104	6.835	7.194												
Initial Loss (no. of fish)	570,518	634,053	68,089	71,673	5,107	5,375	6,165,720	6,489,730	8,691,440	9,148,180	55,250	74,400	4,159	5,600								
Annual Natural Mortality Rate	20%	20%	10%	10%	10%	10%	18%	18%	18%	18%	10%	10%	10%	10%								
Years to 5/ target fishery	5.0	5.0	0.5	0.5	0.5	0.5	3.0	3.0	3.0	3.0	1.7	1.7	0.5	0.5								
Potential Loss (no. of fish)	186,947	207,767	64,595	67,995	4,845	5,100	3,399,580	3,578,230	4,792,180	5,044,010	46,190	62,199	3,946	5,313								
Utilization by domestic fishermen	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	93%	93%	60%	60%								
Average weight (lbs. round wght.)	40	40	6	6	7	7	2.5	2.5	1.5	1.5	24	24	7	7								
Loss to domestic fishermen (lbs.)	7,477,900	8,310,660	387,567	407,967	33,912	35,697	8,498,960	8,945,580	7,188,270	7,566,020	1,030,950	1,388,290	16,571	22,313								
Real Exvessel Price (\$/lbs. round wght.)	8/ 1.12	8/ 1.12	2.00	2.00	2.00	2.00	.52	.52	.25	.25	1.00	1.00	.55	.55								
Discount Rate (real)	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10								
Loss in Domestic Exvessel Gross Earnings (discounted present value)	5,200,370	5,779,500	739,062	777,962	64,668	68,071	3,320,400	3,494,890	1,350,160	1,421,120	876,741	1,180,620	8,690	11,701								
Net Savings from Amend. 3 (discounted real present value)	\$579,130		\$38,900		\$3,403		\$174,490		\$70,960		\$303,879		\$3,011									

- 1/ Projected 1982 Foreign Groundfish Catch, 1,271,582 mt.
- 2/ The incidental catch of golden king crab is excluded since this species is not targeted on by U.S. fishermen.
- 3/ w/ = with w/o = without Amendment 3.
- 4/ Incidental catch rates for halibut are expressed as mt. of halibut per mt. of groundfish; for king and Tanner crab they are numbers of crab per mt. of groundfish. Salmon interception levels are based upon a negotiated absolute number of fish irrespective of the size of groundfish catch.
- 5/ These values are based upon the typical age of prohibited species taken in the groundfish and target fisheries.
- 6/ It has been estimated that 93 percent of the chinook and 60 percent of the chums taken as incidental catch consist of salmon of western Alaska region.
- 7/ For each species, this is an estimate of the real exvessel price which will be in effect the year incidentally taken fish would have been taken in the directed fishery.
- 8/ This is based on a dressed exvessel price of \$1.50/lbs. and a recovery factor of .75.

TABLE 4 Estimated Impact of Prohibited Species Interceptions in the Foreign Trawl Fishery Bering Sea/Aleutian Islands Area, 1983 ^{1/}

	Halibut ^{3/}		Red King Crab		Blue King Crab		Bairdi Tanner Crab		Opilio		Chinook Salmon		Other	
	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o
Incidental ^{4/} Catch Rate	.00196	.00245	.0507	.0564	.0038	.0042	4.594	5.104	6.475	7.194				
Initial Loss (no. of fish)	494,142	616,416	62,711	69,679	4,703	5,226	5,678,710	6,309,220	8,004,920	8,646,330	45,500	74,400	3,425	5,600
Annual Natural Mortality Rate	20%	20%	10%	10%	10%	10%	18%	18%	18%	18%	10%	10%	10%	10%
Years to ^{5/} target fishery	5.0	5.0	0.5	0.5	0.5	0.5	3.0	3.0	3.0	3.0	1.7	1.7	0.5	0.5
Potential Loss (no. of fish)	161,920	201,987	59,493	66,103	4,462	4,958	3,131,060	3,478,700	4,413,660	4,903,710	38,039	62,199	3,249	5,313
Utilization by domestic fishermen	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	6/ 93%	6/ 93%	6/ 60%	6/ 60%
Average weight (lbs. round wght.)	40	40	6	6	7	7	2.5	2.5	1.5	1.5	24	24	7	7
Loss to domestic fishermen (lbs.)	6,476,810	8,079,490	356,955	396,619	31,234	34,704	7,827,640	8,696,750	6,620,490	7,355,570	849,020	1,388,290	13,647	22,313
Real Exvessel ^{7/} Price (lbs. round wght.)	1.12 ^{8/}	1.12 ^{8/}	2.00	2.00	2.00	2.00	.52	.52	.25	.25	1.00	1.00	.55	.55
Discount Rate (real)	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
Loss in Domestic Exvessel Gross Earnings (discounted present value)	3,820,360	5,462,450	680,686	756,323	59,560	66,178	3,058,130	3,397,680	1,243,520	1,381,590	722,022	1,180,620	7,157	11,701
Net Savings from Amend. ³ (discounted real present value)	\$1,642,090		\$75,637		\$6,618		\$339,550		\$138,070		\$458,598		\$4,544	

- 1/ Projected 1983 Foreign Groundfish Catch, 1,236,212 mt.
- 2/ The incidental catch of golden king crab is excluded since this species is not targeted on by U.S. fishermen.
- 3/ w/ = with w/o = without Amendment 3.
- 4/ Incidental catch rates for halibut are expressed as mt. of halibut per mt. of groundfish; for king and Tanner crab they are numbers of crab per mt. of groundfish. Salmon interception levels are based upon a negotiated absolute number of fish irrespective of the size of groundfish catch.
- 5/ These values are based upon the typical age of prohibited species taken in the groundfish and target fisheries.
- 6/ It has been estimated that 93 percent of the chinook and 60 percent of the chums taken as incidental catch consist of salmon of western Alaska region.
- 7/ For each species, this is an estimate of the real exvessel price which will be in effect the year incidentally taken fish would have been taken in the directed fishery.
- 8/ This is based on a dressed exvessel price of \$1.50/lbs. and a recovery factor of .75.

TABLE 5. Estimated Impact of Prohibited Species Interceptions in the Foreign Trawl Fishery Bering Sea/Aleutian Islands Area, 1984

	Halibut <u>3/</u>		Red <u>King Crab</u>		Blue <u>Bairdi</u>		Tanner Crab		Opilio		Chinook <u>Salmon</u>		Other	
	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o
Incidental <u>4/</u> Catch Rate	.00171	.00245	.0479	.0564	.0036	.0042	4.338	5.104	6.116	7.194				
Initial Loss (no. of fish)	419,122	599,270	57,579	67,741	4,318	5,081	5,214,010	6,133,720	7,349,880	8,646,330				
Annual Natural Mortality Rate	20%	20%	10%	10%	10%	10%	18%	18%	18%	18%				
Years to <u>5/</u> target fishery	5.0	5.0	0.5	0.5	0.5	0.5	3.0	3.0	3.0	3.0				
Potential Loss (no. of fish)	137,338	196,369	54,624	64,264	4,097	4,820	2,874,840	3,381,940	4,052,490	4,767,310				
Utilization by Domestic fishermen	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Average weight (lbs. round wght.)	40	40	6	6	7	7	2.5	2.5	1.5	1.5				
Loss to domestic fishermen (lbs.)	5,493,510	7,854,760	327,745	385,587	28,678	33,739	7,187,100	8,454,850	6,078,730	7,150,970				
Real Exvessel <u>6/</u> Price (\$/lbs. round wght.)	1.12	1.12	2.00	2.00	2.00	2.00	.52	.52	.25	.25				
Discount Rate (real)	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10				
Loss in Domestic Exvessel Gross Earnings (discounted present value)	3,820,360	5,462,450	624,986	735,285	54,686	64,337	2,807,880	3,303,170	1,141,760	1,343,160				
Net Savings from Amend. <u>3</u> (discounted real present value)	\$1,642,090		\$110,299		\$9,651		\$495,290		\$201,400					

A full and complete re-view of the salmon incidental catch reduction program will be conducted in 1983 to determine what salmon incidental catch limits should be thereafter. Therefore, no estimates are available for 1984 salmon incidental catch levels.

- 1/ Projected 1984 Foreign Groundfish Catch, 1,201,826 mt.
- 2/ The incidental catch of golden king crab is excluded since this species is not targeted on by U.S. fishermen.
- 3/ w/ = with w/o = without Amendment 3.
- 4/ Incidental catch rates for halibut are expressed as mt. of halibut per mt. of groundfish; for king and Tanner crab they are numbers of crab per mt. of groundfish. Salmon interception levels are based upon a negotiated absolute number of fish irrespective of the size of the groundfish catch.
- 5/ These values are based upon the typical age of prohibited species taken in the groundfish and target fisheries.
- 6/ For each species, this is an estimate of the real exvessel price which will be in effect the year incidentally taken fish would have been taken in the directed fishery.
- 7/ This is based on a dressed exvessel price of \$1.50/lbs. and a recovery factor of .75.

TABLE 6. Estimated Impact of Prohibited Species Interceptions in the Foreign Trawl Fishery Bering Sea/Aleutian Islands Area, 1985

1/

	<u>Halibut</u>		<u>Red</u>		<u>Blue</u>		<u>Bairdi</u>		<u>Tanner Crab</u>		<u>Opilio</u>		<u>Chinook</u>		<u>Other</u>	
	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o
Incidental Catch Rate	.00147	.00245	.0451	.0564	.0034	.0042	4.083	5.104	5.756	7.194						
Initial Loss (no. of fish)	350,275	582,601	52,685	65,856	3,951	4,939	4,770,770	5,963,100	6,725,070	8,405,820						
Annual Natural Mortality Rate	20%	20%	10%	10%	10%	10%	18%	18%	18%	18%						
Years to <u>5/</u> target fishery	5.0	5.0	0.5	0.5	0.5	0.5	3.0	3.0	3.0	3.0						
Potential Loss (no. of fish)	114,778	190,907	49,982	62,476	3,749	4,686	2,630,450	3,287,860	3,707,990	4,634,700						
Utilization by domestic fishermen	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%						
Average weight (lbs. round wght.)	40	40	6	6	7	7	2.5	2.5	1.5	1.5						
Loss to domestic fishermen (lbs.)	4,591,130	7,636,260	299,890	374,861	26,240	32,800	6,576,130	8,219,660	5,561,980	6,952,050						
Real Exvessel <u>6/</u> Price (\$/lbs. round wght.)	1.12	1.12	2.00	2.00	2.00	2.00	.52	.52	.25	.25						
Discount Rate (real)	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10						
Loss in Domestic Exvessel Gross Earnings (discounted present value)	3,192,820	5,130,500	571,867	714,832	50,038	62,547	2,569,190	3,211,290	1,390,490	1,738,010						
Net Savings from Amend. 3 (discounted real present value)	\$2,117,680		\$142,965		\$12,509		\$642,100		\$347,520							

A full and complete review of the salmon incidental catch reduction program will be conducted in 1983 to determine what salmon incidental catch limits should be thereafter. Therefore, no estimates are available for 1985 salmon incidental catch levels.

- 1/ Projected 1985 Foreign Groundfish Catch, 1,168,395 mt.
- 2/ The incidental catch of golden king crab is excluded since this species is not targeted on by U.S. fishermen.
- 3/ w/ = with w/o = without Amendment 3.
- 4/ Incidental catch rates for halibut are expressed as mt. of halibut per mt. of groundfish; for king and Tanner crab they are numbers of crab per mt. of groundfish. Salmon interception levels are based upon a negotiated absolute number of fish irrespective of the size of the groundfish catch.
- 5/ These values are based upon the typical age of prohibited species taken in the groundfish and target fisheries.
- 6/ For each species, this is an estimate of the real exvessel price which will be in effect the year incidentally taken fish would have been taken in the directed fishery.
- 7/ This is based on a dressed exvessel price of \$1.50/lbs. and a recovery factor of .75.

TABLE 7. Estimated Impact of Prohibited Species Interceptions in the Foreign Trawl Fishery Bering Sea/Aleutian Islands Area, 1986

	<u>Halibut</u> 3/		<u>Red</u> <u>King Crab</u>		<u>Blue</u> <u>Crab</u>		<u>Bairdi</u> <u>Tanner Crab</u>		<u>Opilio</u> <u>Crab</u>		<u>Chinook</u> <u>Salmon</u>		<u>Other</u> <u></u>	
	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o	w/	w/o
Incidental Catch Rate	.00122	.00245	.04227	.05636	.00317	.00423	3.828	5.104	5.396	7.194				
Initial Loss (no. of fish)	282,618	566,395	48,018	64,025	3,601	4,802	4,348,160	5,797,230	6,129,330	8,172,000				
Annual Natural Mortality Rate	20%	20%	10%	10%	10%	10%	18%	18%	18%	18%				
Years to 5/ target fishery	5.0	5.0	0.5	0.5	0.5	0.5	3.0	3.0	3.0	3.0				
Potential Loss (no. of fish)	92,608	185,596	45,554	60,739	3,417	4,555	2,397,440	3,196,410	3,379,520	4,505,780				
Utilization by domestic fishermen	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%				
Average weight (lbs. round wght.)	40	40	6	6	7	7	2.5	2.5	1.5	1.5				
Loss to domestic fishermen (lbs.)	3,704,340	7,423,850	273,325	364,434	23,916	31,888	5,993,590	7,991,020	5,069,280	6,758,670				
Real Exvessel Price (\$/lbs. round wght.)	1.12	1.12	2.00	2.00	2.00	2.00	.52	.52	.25	.25				
Discount Rate (real)	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10				
Loss in Domestic Exvessel Gross Earnings (discounted present value)	2,576,110	5,162,780	521,211	694,948	45,606	60,808	2,341,600	3,121,960	952,156	1,269,470				
Net Savings from Amend. 3 (discounted real present value)	\$2,586,670		\$173,737		\$15,202		\$780,360		\$317,314					

A full and complete review of the salmon incidental catch reduction program will be conducted in 1983 to determine what salmon incidental catch limits should be there after. Therefore, no estimates are available for 1986 salmon incidental catch levels.

- 1/ Projected 1986 Foreign Groundfish Catch, 1,135,895 mt.
- 2/ The incidental catch of golden king crab is excluded since this species is not targeted on by U.S. fishermen.
- 3/ w/ = with w/o = without Amendment 3.
- 4/ Incidental catch rates for halibut are expressed as mt. of halibut per mt. of groundfish; for king and Tanner crab they are numbers of crab per mt. of groundfish. Salmon interception levels are based upon a negotiated absolute number of fish irrespective of the size of the groundfish catch.
- 5/ These values are based upon the typical age of prohibited species taken in the groundfish and target fisheries.
- 6/ For each species, this is an estimate of the real exvessel price which will be in effect the year incidentally taken fish would have been taken in the directed fishery.
- 7/ This is based on a dressed exvessel price of \$1.50/lbs. and a recovery factor of .75.

the salmon incidental catch reduction program in 1983 to determine the salmon catch limits thereafter. This review will consider the status of the salmon resource, the economic and technological possibility of further incidental catch reductions, and the reasonableness of the goal of achieving a reduction in salmon PSC of 16,250 for chinook and a total of 17,473 fish by 1986.

While the magnitude of further salmon PSC reductions for 1984 through 1986 is undetermined at this time, if we assume maintenance of at least the 1983 salmon interception figures as a base for 1984 through 1986, the total discounted real present value of the five-year PSC reduction program for halibut, crabs, and salmon is more than \$14.8 million at the exvessel level. Considerably greater total benefits will accrue to regional as well as U.S. economies as the impact of these savings move through the support, processing, wholesale/distribution, and retail sectors.

The second category of benefits accruing from the implementation of Amendment 3 are associated with the enhanced development opportunities of the domestic groundfish fishery. As previously noted, the Council has determined that no restrictive regulation will be imposed upon domestic groundfish trawlers to reduce PSC levels. Rather, voluntary measures on the part of U.S. trawlers are expected to adequately protect prohibited species stocks. This regulatory flexibility is seen to be vitally important to the sustained growth and economic success of the domestic groundfish industry. While no quantitative estimate of the benefits from this decision are presented here, many feel that without

this de facto exemption from mandatory PSC reduction levels the U.S. groundfish fishery, yielding a catch in 1980 with an exvessel value in excess of \$11.77 million, would not exist.

Another benefit of the amendment to the U.S. groundfish fishery will come from transfers of methodological and gear advances made by foreign fishermen under the "experimental fishery" provisions cited earlier. This transfer will contribute importantly to the expedient and efficient development of the domestic industry and at essentially no cost to either the U.S. industry or economy in general.

The third category of benefits associated with Amendment 3 involve the prospects for improved management of the Pacific halibut, king crab, Tanner crab, and salmon resources. By significantly reducing the interception and attendant mortality of juvenile prohibited species in the groundfish trawl fisheries, the amendment enhances the health and stability of the biomass and contributes to the efficient management of U.S. fisheries dependent upon these stocks.

c. Summary of Regulatory Impacts

An examination of actions proposed in Amendment 3 indicates that the plan is likely to facilitate significant reduction in the incidence of prohibited species loss while imposing no constraint to the continued expansion of the U.S. groundfish industry. Furthermore, the schedule of PSC reductions should not seriously impair the ability of the foreign fishery to harvest allocated TALFF.

Provisions of the amendment encourage voluntary investment by foreign nations in gear and fishing technology experimentation which should increase total efficiency and reduce fishing costs in both the foreign and domestic groundfish sectors.

Implementation of the amendment would impose no additional reporting requirements on either foreign or domestic operators and will not have significant adverse effects upon substantial numbers of small entities. In the long run, the amendment will enhance the economic prospects for domestic directed fisheries by reducing the PSC loss and improving management of Pacific halibut, salmon, king crab, and Tanner crab fisheries.

Amendment 3 involves no additional administrative, management, or enforcement costs beyond those required by the FMP for this fishery.

- B. Alternative 2 - close INPFC areas I and II of the Bering Sea to groundfish trawling during the period October 1 through March 31.

INPFC statistical areas I and II of the Bering Sea (Figure 1) account for 91 percent of the total foreign groundfish harvest in the region (based on 1980 catch data). These two areas are also believed to harbor large seasonal concentrations of prohibited species, particularly salmon and herring.

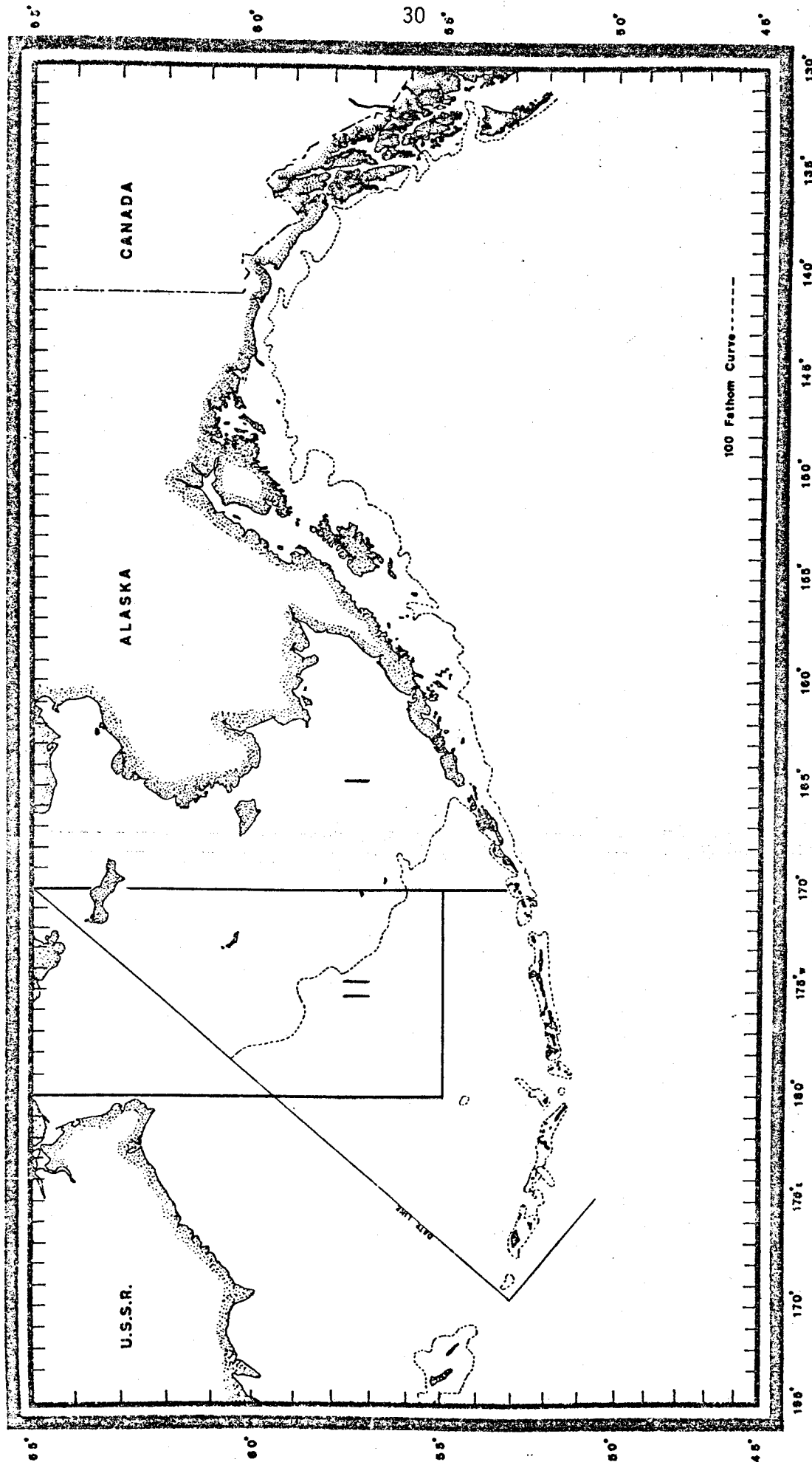


Figure 1 -- INPFC Statistical Areas 1 and 2

1. Description of management measures.

On August 21, 1980, NMFS received a petition from organizations and villages of southwestern Alaska seeking severe restrictions on foreign trawling operations in INPFC areas I and II in order to protect concentrations of prohibited species from loss to bottomfish nets. The petitioners were particularly concerned about the foreign interception of chinook salmon of North American origin. They cited catch statistics which indicated that in 1978 foreign trawl interceptions of these economically and culturally important salmon amounted to just over 39,200 fish. In 1979 that figure had increased to over 100,000 chinook, with every indication the upward trend would continue. As a result, they were seeking a complete time and area closure for foreign trawlers in these areas during periods of salmon concentrations and a careful review to see if domestic groundfish trawlers might not also be excluded from trawling in these areas. The duration of the closure to all groundfish trawling would be October 1 through March 31 in order to provide the necessary protection envisioned under this alternative.

2. How the management measures achieve the Prohibited Species Catch Reduction objectives.

A complete closure of all groundfish trawl activity in INPFC areas I and II from October 1 through March 31 would result in improvements in the interception of immature North American chinook salmon and thus would seemingly contribute to the achievement of objective one, i.e. to effect gradual reductions in the catch of prohibited species. However,

assuming no change in OY, condensing a year-round fishery into a highly concentrated and highly competitive six-month fishery might (1) adversely affect the groundfish stocks themselves, endangering the productivity of this important world food resource and undermining the development of the domestic groundfish industry, or (2) aggravate the problem of the incidental take of marine mammals, Pacific halibut, king and Tanner crabs. In either case this alternative would be contrary to the expressed PSC objectives set forth by the Council.

The closure of these times and areas might also make it impossible for the foreign fleet to harvest its groundfish allocation and thus prevent the attainment of OY, both of which are contrary to the National Standards and provisions of the Magnuson Act.

a. Costs

The closure of INPFC areas I and II to trawling from October 1 through March 31 would result in severe economic dislocation and unutilized fishery resources. Foreign economies would be hurt by idling about 160 fishing vessels and attendant crews for six months each year. Alternative fishing grounds in the U.S. FCZ cannot accommodate this number of displaced vessels.

Even if U.S. trawlers were exempted from this closure, the intensified six-month foreign fishery might adversely affect developing U.S. groundfish fisheries and expanding U.S. Tanner crab fisheries in terms of gear conflict and grounds preemptions.

Participation by domestic fishermen in joint venture fisheries, accounting for the vast majority of the current domestic groundfish activity, would be jeopardized if foreign processing vessels were not available. With an intensified, shortened fishery, foreign processing capacity probably would be required to support their own flag catcher vessels in an accelerated effort to acquire allocated TALFF. This tendency might be offset to some extent by strong adherence to U.S. "fish and chips" policy. However, a dampening of cooperative joint venture development of U.S. capacity seem unavoidable in the face of such a closure.

It is probable, in any case, that under the constraints of a six-month season significant amounts of the groundfish OY would go unharvested. In 1980, nearly 30 percent of the total foreign groundfish catch occurred during the proposed closure period.

Inadequate additional foreign capacity is believed to exist to permit the harvest of TALFF during the shortened season, and without access to foreign processing capacity, domestic fishermen have, for the foreseeable future, no prospects for taking DAH. The resulting reduction in total groundfish catch from the region could have profound disruptive impacts on world protein supplies, availability and price of fisheries products, as well as employment and other socioeconomic parameters both in the U.S. and in foreign nations.

b. Benefits

If the proposal to close INPFC areas I and II to all trawling from October 1 through March 31 were implemented, the total benefit would include PSC savings for all designated species. However, as noted above, the intensified six-month groundfish fishery made necessary by the winter closure might offset PSC savings for most of these species, with the possible exception of salmon. Concerning the economically and culturally important western Alaska chinook salmon, representing over 93 percent of the total salmon interception in the region's trawl fisheries, and assuming that the interception reported in 1980 of approximately 104,000 chinook represents the upper bound potential annual PSC savings for this species in each year of the time/area closure, it is possible to quantitatively estimate the benefits accruing from this alternative. Employing the same assumptions as were used in developing Tables 3 through 7 above, the following, Table 8, is obtained.

Table 8 -- Estimated Savings to domestic Chinook Salmon Fisheries from Implementation of Alternative 2.

Incidental catch (no. of fish)	104,000
Annual Natural Mortality	10%
Years to target fishery	1.7
Potential savings (no. of fish)	96,720
Utilization by domestic fishermen ^{1/}	.93
Actual savings to domestic target fishermen (no. of fish)	80,858
Average weight (lbs., round weight)	24
Savings to domestic fishermen (lbs.)	1,940,592
Real exvessel price (\$/lbs. round weight)	\$1.00
Discount rate	.10
Discounted present value of the benefit to domestic chinook salmon fishermen	\$1,650,312.74

^{1/} It has been estimated that 93 percent of the chinook salmon intercepted in the Bering Sea groundfish fishery are of western Alaska origin. The remainder are Asia stocks.

As Table 8 indicates, the discounted real present value of the benefits accruing from this alternative would annually amount to slightly over \$1.6 million at the exvessel level. For a comparative perspective, this is approximately equivalent to the reported gross exvessel value of the catch of just one of the five U.S. joint venture operations which was involved in the developing domestic groundfish industry in 1980.^{2/} The

^{2/} Source: The Joint Venture Fishery for Yellowfin Sole; Barry Fisher; Alaska Fisheries Development Foundation; 1980.

total joint venture catch of all five domestic operations accounted for less than 2.5 percent of the groundfish catch landed in 1980 from the region.

Few, if any other, economic or conservation benefits would be expected to accrue from implementation of Alternative 2. There would, of course, be an economic transfer from offshore fisheries to onshore fisheries, the precise magnitude of which is not readily estimable.

- C. Alternative 3 - Do not adopt Amendment 3 but continue prohibited species management as prescribed in FMP (status quo).

- 1. Description of management measures.

Under the current FMP both foreign and domestic groundfish fishermen are required to make every effort to "minimize" their catches of prohibited species. This requirement reflects the Council's recognition that incidental interceptions of king and Tanner crabs, Pacific halibut, and salmon, among other designated species, are of considerable economic and/or cultural importance to domestic user groups.

The FMP, as modified by Amendment 1a, provides that the PSC of chinook salmon for foreign trawlers during any fishing year shall not be more than 55,250 fish. It further specifies time and area closures once a nation's portion of the chinook salmon PSC is attained. However, unlike Amendment 3, there is no schedule of reductions below 55,250 chinook salmon annually.

The FMP also provides for time and area closures intended to protect juvenile Pacific halibut and concentrations of herring. However, no PSC thresholds are specified for these or other prohibited species.

2. How the management measures achieve the Prohibited Species Catch Reduction objectives.

Provisions of the FMP do provide some protection for prohibited species stocks from interception by foreign groundfish trawlers. However, all indications are that these measures are insufficient to ensure attainment of Objective 1, i.e. the systematic incremental reduction in prohibited species by-catch rates in the foreign fishery. Without more explicit targets and incentives than are contained in the current FMP, this objective cannot be met. The FMP does, however, provide an adequate framework by which objective 2 might be obtained. That is, the FMP as presently configured, does provide an environment which supports domestic harvesting of groundfish with an awareness of principles and techniques for minimizing incidental catches of Pacific halibut, salmon, and king and Tanner crabs. The FMP does not, however, provide explicit incentives for gear and technology experimentation which are specifically identified in Amendment 3. It is thus an inferior means to achieving Objective 2 when compared to the Amendment 3 alternative.

3. Analysis of the impacts.

a. Costs

The costs associated with maintenance of the status quo with regards to prohibited species interceptions in the Bering Sea/Aleutian Islands area groundfish fishery can be evaluated as equivalent to the benefits foregone by not adopting the proposed PSC reduction schedule set out in Amendment 3. That is, by referring to Tables 3 through 7, the discounted real present value of the cost of not implementing the PSC reduction schedule can be read across the last row of each table. Over the five-year duration of the planned PSC reductions the benefits foregone (costs) of non-implementation exceed \$15 million (discounted real present value). Other costs, such as administrative, management, and enforcement expenses, would not vary whether Amendment 3 or the "status quo" alternative were selected. These costs are detailed in the RIR for the Bering Sea/Aleutian Islands Area FMP. Since they do not represent a net change in costs unique to this PSC amendment decision, it is appropriate not to include them as costs for purposes of evaluating the alternative.

b. Benefits

There are no apparent benefits to non-adoption of Amendment 3 and maintenance of the status quo with regards to prohibited species interceptions in the Bering Sea/Aleutian Islands area groundfish fishery.

V. Literature Cited

Fisher, Barry 1980. The Joint Venture Fishery for Yellowfin Sole The Bering Sea, Summer 1980, A Case Study in Fishery Development. Alaska Fisheries Development Foundation.

Marasco, Richard J., Joseph M. Terry 1981. Methods to control the incidental catch of prohibited species. In North Pacific Fishery Management Council, 1981. Council Document No. 13, 195 p.

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